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Sketch Map of

TROPICAL AMERICA

Showing the Geographical Range of the

Tanagrine Genus

CALLISTE.

Engraved at Stanfords Geographical Establishment 6 Charing Cross London.

A

MONOGRAPH

OF

THE BIRDS FORMING

THE TANAGRINE GENUS CALLISTE;

ILLUSTRATED BY

COLOURED PLATES OF ALL THE KNOWN SPECIES.

Deposit of S. F. BAIRD.

By PHILIP LUTLEY SCLATER, M.A.,

FELLOW OF CORPUS CHRISTI COLLEGE, OXFORD;
FELLOW OF THE ZOOLOGICAL AND LINNEAN SOCIETIES OF LONDON; CORRESPONDENT OF THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA; HON. MEMBER OF THE GERMAN ORNITHOLOGICAL SOCIETY; MEMBER OF THE BRITISH AND AMERICAN ASSOCIATIONS FOR THE ADVANCEMENT OF SCIENCE, ETC.

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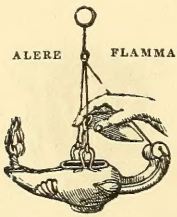

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BIRDS

PREFACE.

In every department of Zoology, I believe, pictorial representation, even though not of the most finished character, is better qualified to give a good idea of the object intended than the most accurate description. Such at least is the case in Ornithology; and the comparative neglect shown to what would seem likely to be one of the most attractive branches of Natural History, may perhaps be partly attributed to the scarcity of works containing coloured illustrations of birds, and their usually excessive costliness. The present volume is the result of an attempt to contribute something towards meeting these deficiencies, by giving figures of an interesting group of this class of animals, sufficiently accurate for all scientific purposes, and at a price which, it is hoped, will render it not unattainable to many, who have hitherto been generally precluded from acquiring books of this sort. The work is not expected to be a profitable undertaking, but, should a number of copies be disposed of sufficient nearly to meet the expenses of publication, it is in contemplation to issue other volumes of a similar character.

P. L. S.

49 Pall Mall, Dec. 1, 1857.

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MONOGRAPH

OF

THE GENUS CALLISTE.

INTRODUCTION.

The genus *Tanagra*, as created by Linnæus, embraced the whole of the brilliant group of American birds to which modern Naturalists assign the rank of a subfamily at least, if not that of a family. The name is a softened and more Latin-like form of the barbarous term *Tangara*, by which Brisson, Buffon and other older writers designated these birds, and which appears to have been first applied to the *Calliste tatao*, the "Tangara" *par emphase* of the more ancient authors.

Anselm Gaetan Desmarest in his 'Histoire Naturelle des Tangaras, des Manikins et des Todiers,' published at Paris in 1805, was the first writer who attempted the subdivision of the Tanagers. He created the very natural groups *Ramphocelus* and *Euphonia*, retaining the *Callistæ* along with—what are in truth their nearest allies —the true *Tanagræ*, and placing them at the head of this section. The same course was pursued by Vieillot and Cuvier in 1816 and 1817. Both these Naturalists proposed numerous subdivisions of the Tanagers, but neither of them separated the *Callistæ* from the true Tanagers. And so the matter remained until 1826, when Boié, in his 'Generalübersicht der ornithologischen Ordnungen, Familien und Gattungen,' which appeared in the 'Isis' for that year, proposed separate names for both these groups, calling what are now generally known as the true *Tanagræ* by the term *Thraupis*, and creating a new name *Calliste* (καλλίστη, *pulcherrima*) for the present section, of which he gives as a type *Tanagra tricolor* of Gmelin. Boié,

however, made no attempt to group together the species of his subdivision, and it is to Swainson—who in the 'Zoological Journal' for 1827 had proposed the generic term *Aglaia* (*ἀγλαΐα, splendor*) for the same group—that we are indebted for first uniting some of the scattered species of this genus under one head. Swainson, in the second volume of his 'Classification of Birds,' gives eight examples of *Aglaia*, all of which are still recognized as proper members of this group of Tanagers. Mr. G. R. Gray, in the first edition of his 'List of Genera of Birds,' published in 1840, created a third name for the same genus, *Calospiza* (*καλὸς, pulcher*, et *σπίζα, fringilla*), considering *Calliste* too much like *Callista* (used by Poli, an Italian writer, in 1791, for a genus of *Mollusca*), and rejecting *Aglaia* as having been otherwise employed by Eschscholtz in 1825. In his great work on the genera of birds, however, Mr. Gray uses *Calliste* as the name of this group, and gives an excellent list of species—no less than thirty—nearly the whole of which truly belong to this form.

In the years 1849 and 1850, being attracted by the beauty of these birds, I began to pay particular attention to them, and after describing several, which I thought then unnoticed, in Sir William Jardine's 'Contributions to Ornithology,' I wrote, in 1851, in the second part of the same work, published in the month of April, a full synopsis of the genus, giving specific characters and other particulars as far as I was then acquainted with them. Curiously enough the same group was about this time the subject of the labours of two other Naturalists of different nations. Dr. Cabanis, of Berlin, had a few months previously printed the first sheets of his list of Herr Heine's ornithological collection, called 'Museum Heineanum,' which contains the Tanagers; and Prince Bonaparte's excellent article entitled, 'Note sur les Tangaras,' appeared in the 'Revue et Magasin de Zoologie' for the months of April and May, 1851. The same species consequently received in some instances names from three different writers, and it becomes a difficult question to determine the exact priority of each designation. To this, however, I believe Dr. Cabanis' names are strictly entitled, as I am informed that the sheets of his work containing the Tanagers—though not in England—were in circulation in Germany in the latter part of the year 1850, and I have consequently given his terms the preference. Since

the issue of my 'Synopsis of Callistæ,' I have written a careful revision of the species in a general Synopsis of Tanagers, published in the 'Proceedings of the Zoological Society' for last year, and have added three or four newly-discovered birds to the genus. The arrangement adopted in the present work is the same as is there given.

With regard to the position of the genus *Calliste* in the Natural System, it is certainly one of the most typical genera of the Tanagers, that is, one of the genera in which the characters of the Tanagers are most fully developed. To arrive, therefore, at its true position, we must first say a few words on the Tanagers generally. Now a Tanager, as I have already remarked in my observations on these birds published in the 'Proceedings of the Zoological Society,' is a dentirostral Finch, that is, a bird which, having all the essential characters of the Finch, is yet so far modified, as regards certain parts of its structure, as to fit it for feeding, not on grains and seeds, which are the usual food of the *Fringillidæ*, but on soft fruits and insects, the habitual food of the *Sylviidæ*. Thus it happens that the views of modern Naturalists have varied concerning the true position of these birds, according as they have given greater weight to their Fringilline or Sylviine affinities. Mr. G. R. Gray, following some of the older authors, arranges them along with the *Fringillidæ*, while Dr. Cabanis and Prince Bonaparte remove them far away into the same family with the American Wood-warblers (*Mniotiltinæ*). Now if we take the more typical portion of the Tanagers, the *Pyrangæ*, *Ramphoceli*, *Tanagræ*, *Callistæ*, *Euphoniæ*, &c., by themselves, we can easily conceive that it may at first sight seem more natural to associate them along with the American Wood-warblers. But when we look at the group as a whole, and see the gradual increase of Fringilline resemblances as we pass through *Chlorospingus* into *Arremon* and *Saltator*, and finally arrive at *Pitylus*, which can hardly be separated from the *Coccothraustinæ*, I think we can scarcely doubt about the true position of the Tanagers. I do not contend that they must necessarily be placed with the family of *Fringillidæ*, but that, if not within the limits of that family, they must stand as their next neighbours, and as a very closely-allied group. But the fact is that, if we could arrive at a perfect natural arrangement—a simple impossibility in a linear series—there is no doubt that we should place the Tanagers also near the American

Mniotiltinæ, making them form the transition between the Finches and that group. For it cannot be denied that it is extremely difficult to draw a line and say exactly where the Tanagers end and the Wood-warblers begin. Take for instance the two forms *Nemosia* and *Trichas*: how difficult it is to say positively whether certain birds are more naturally to be placed in one of these genera or the other! Some of the *Chlorospingi* again are so much more like Mniotiltines than Tanagrines at first sight, that the most experienced ornithologist, unless accurately acquainted with these forms, would be quite as likely to refer them to the former. But though we cannot have a perfectly natural arrangement, it is important to adopt the *most* natural, and I am decidedly of opinion that on the whole the most unobjectionable position for the Tanagers is to rank them simply as a distinct subdivision of the great family *Fringillidæ*.

Commencing then the subfamily *Tanagrinæ* with the most Finch-like form—*Pitylus*—we find birds so closely allied to *Goniaphæa*, *Hedymeles*, *Cardinalis* and other genera of the American Coccothraustines, as to make us hesitate at first sight as to which series they would most naturally fall into. The transition, however, from the section of the *Pityli*, which has obtained the subgeneric name *Caryothraustes*, to the next genus *Orchesticus*, and so on to the much more decided form *Saltator*, is easy, and assists to incline us to retain the *Pityli* within the subfamily of Tanagrines. Leading off from *Orchesticus* is perhaps as good a situation as any for the somewhat abnormal bird *Diucopis fasciata*, and a second so-called species of the genus, still more troublesome to arrange in a satisfactory way. The genus *Saltator* is numerous in species and strongly marked in characters, the members of this group being readily distinguishable from all other birds, as well by their structure as by the peculiar style of plumage which pervades them. This indeed is carried to such an extent that the *Saltatores* are very liable to be confounded together, and from the insufficient descriptions given by too many writers, it is a task of no small difficulty to recognize the species, which appear to exceed twenty in number. Near *Saltator* comes the remarkable parrot-green *Psittospiza*, an isolated type; and, leading on towards *Cissopis*, the elegant *Lamprospiza*, another genus of a single species. In *Arremon*, and its scarcely separable ally *Buarremon*, we have again a great development of specific

forms, and much resemblance in style of colouring among them. The San-Domingan bird, miscalled *Phœnicophilus*, according to the weighty testimony of M. Sallé, is an *Arremon* with the bill elongated and tail shortened and squared; and a second ally of this genus is the curious form which I have denominated *Oreothraupis*, peculiar to the Andes of Ecuador. *Chlorospingus*, a tenuirostral development of *Arremon*, and *Pyrrhocoma*, with its single species, lead on clearly to *Nemosia*, and serve to connect what may be called the Fringillacean Tanagers—allowed by nearly all writers to be *Fringillidæ*—with *Nemosia* and the true Tanagers, the more typical section of the group.

Entering then the true Tanagers (*quæ ad Mniotiltinas magis spectant*) by *Nemosia*, we pass by an easy transition into *Tachyphonus*, a well-defined group, of which the males are always clothed in black, and the females in a modest brown. Two abnormal developments springing from *Tanagra* are *Trichothraupis* and *Eucometis* on one side, both presenting some external similarities to birds belonging to a very different family—the *Tyrannidæ*—and *Cypsnagra*, with its somewhat swallow-like appearance, on the other. More closely allied to *Tachyphonus* than either of these is *Lanio*, with its three species, where we have the same striking contrast between males and females as in *Tachyphonus*, and the most strongly-toothed form of bill met with in the group, reminding us, as its name is intended to do, of the *Laniidæ*. *Phœnicothraupis* is clearly intermediate in form between these birds and the *Pyrangæ*, though in its colouring rather more approaching the latter group. *Lamprotes* with its brilliant subgenus, *Sericossypha*, and *Orthogonys* seem to be best placed as adjuncts to *Pyranga*, presenting much resemblance to one another in some points of their structure. From the numerous *Pyrangæ*, where the males are red and the females yellow, we pass to *Ramphocelus*, where the corresponding colours are scarlet or dark purple and brown. This is also a genus of many species, but of habits very different from the former; the *Ramphoceli*, like the *Tachyphoni*, living in the low bushes, while the *Pyrangæ* resort to the higher trees of the forest. There is somewhat of an interval between *Ramphocelus* and *Spindalis*, a curious little group peculiar to the West India Islands; from which however we pass easily to *Tanagra*, and its closely allied forms, *Dubusia*, *Compsocoma* and *Buthraupis*. It is perhaps questionable indeed, whether

these three groups are really of more than subgeneric value. *Stephanophorus* is an isolated form, but *Pœcilothraupis* and *Iridornis*, which follow next, are clearly intermediate between *Tanagra* and the *Callistæ*. In brilliancy of colouring they rather resemble the latter, which are rightly named the "most beautiful" of Tanagers. From *Calliste* we approach *Chlorophonia* and *Euphonia*, through the singular little bird which constitutes of itself the type *Diva*, and thus arrive at the end of the subfamily in that direction. In another direction, however, we pass by the brilliant grass-green birds forming the genus *Chlorochrysa* into *Tanagrella*, and here find a very different sort of form from *Euphonia*—being the most tenuirostral (as a Quinarian would say) of the whole group. *Pipridea* seems also to spring from *Calliste* in another direction, and, as respects its second species, certainly shows some *rapprochement* towards *Chlorospingus*, while *Glossiptila*, the only remaining form of *Tanagrinæ*, if it indeed be really retainable within the limits of the group, must be attached to *Tanagrella*.

Having now traced the connexion between the different genera of the Tanagers in a manner which I hope the appended scheme of their arrangement will render more intelligible, I propose to consider more nearly the members of the genus *Calliste*, to which this Monograph particularly relates.

The fifty-two species comprised in the genus *Calliste* form, in my opinion, one very natural genus, distinguished from other Tanagers by their form, size and style of colouring, and showing relations to one another so intimate, that there is not a single species amongst them which any Naturalist, at all well acquainted with the Tanagers, would hesitate about referring at once to this genus. The bill of these birds is straight, rather short, slender and somewhat compressed, the culmen being incurved, the gonys rather rising and the upper mandible pretty distinctly toothed near its termination; the nostrils are oval in shape, placed quite at the base of the mandible and somewhat concealed by the frontal plumes; the wings are rather long, reaching to the middle of the tail; the quills being eighteen in number (as is the case in all the typical *Fringillidæ* and American *Mniotiltinæ*), consisting of nine primaries and nine secondaries. The second, third and fourth primaries are nearly equal and longest, the first being rather shorter than these, but usually

longer than the fifth. The tail is generally moderate in length, composed of twelve rectrices (as is usual in the *Insessores*), more squared than in most genera of Tanagers. The feet are slenderly built, the tarsi being rather short, but longer than the middle toe, with three or four *scutella* faintly marked in front, but no indications of them behind; the inner and outer toes are nearly equal in length, the outer being slightly longer; the claws are short and much curved.

Such are the characters of the genus *Calliste*, and, although its members may easily be divided into a certain number of homochroous groups—that is, groups in which the species correspond in the general style of their colouring,—it would be difficult, and, in fact, has never been attempted, to assign structural characters to these,—although some writers have considered them as true genera. But these groups are by far the most simple way of arranging the species, and we can use the names which have been made for them as the titles of the different sections, without looking upon them at all in the light of genera. Such is the method employed in my "Synopsis Avium Tanagrinarum," published in the 'Proceedings of the Zoological Society' for 1856, and I have followed the arrangement there given in the present volume.

We commence then our series of *Callistæ* with the group of "Paradise Tanagers," of which three species are known, the New Grenadian *C. cœlicolor* being scarcely separable from its representative in Guiana. For this section Prince Bonaparte has used the appellation *Tatao*; they may be recognized by their glossy velvet-black back, brilliant yellow or red rumps, and the curious bright scaly green feathers of the sides of the head. Next follow very naturally the true *Callistæ*, five in number, exhibiting much variety in plumage, and the last of them, *Calliste schranki*, obviously leading on towards the spotted group, which composes Prince Bonaparte's subgenus *Ixothraupis*. These are again five in number, and are distributed, as is often the case, over different geographical areas, in which they seem to represent one another. They are succeeded by the golden *Chrysothraupides*, four of which are very closely allied in colouring, whilst the fifth, *Calliste icterocephala*, is somewhat more idiochroous. In all these four sections the sexes, when adult, are nearly alike, the females being only less brilliant and decided in their tints, but the young birds are occasionally slightly different. In the

next section, however, the *Euschemones*, we find a very decided contrast of plumage in the two sexes of certain species, and some differences in all, the blue and black of the male birds being replaced by green and less decided tints in the females. The *Gyrolæ*, which seem naturally to follow, consist of three species only, each inhabiting its own peculiar geographical district, and appearing not to intrude on that of its neighbour. In this section, I believe, the adult males and females are alike, the young birds being without the red on the head, and the blue and golden tints which are characteristic of maturity. Four black and blue species, constituting the group *Euprepiste*, seem best placed next after this. Here we have the sexes again alike. The same rule obtains in the seventh and last section, for which Cabanis' term *Procnopis* is rightfully to be used, although he created it only for one member of the group, a bird which in some respects seems almost intermediate between the *Procnopides* and the *Euprepistæ*. This is the most numerous in species of all the sections of the genus, no less than seventeen of them being already known; and it is somewhat singular that not one of them is found in the eastern portion of the S. American continent. With the exception of *Callistæ larvata* and *francescæ*, which two nearly allied species are distributed to the north of the Isthmus of Panama, the *Procnopides* appear to be met with only in the slopes of the Andean ranges, and to be particularly abundant in the mountain valleys of New Grenada. It is in this section of *Callistæ* that we may hope, as the tide of discovery progresses through the still imperfectly known ranges of the great American chain, for the discovery of rare and brilliant species yet unknown to the Naturalist.

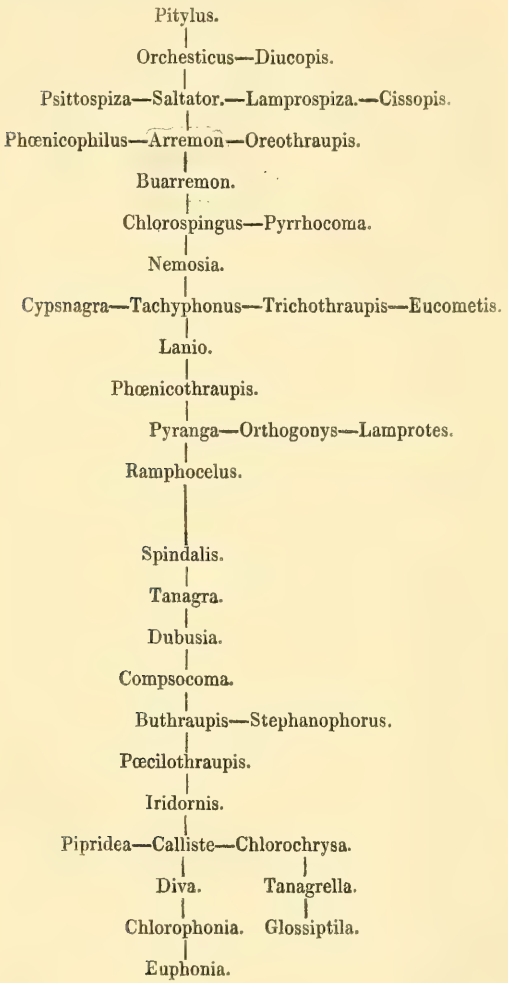
But it will be interesting to review the general geographical distribution of the genus *Calliste*. The whole area occupied by the different species of this form is nearly coequal with that tenanted by several others of the characteristic groups of Tropical America, such as *Galbula*, *Cotinga* and *Pipra*. Its limits will be seen at a glance by referring to the map which forms the frontispiece to the present volume. It is, however, less extended northwards than that of others, such as *Momotus*, *Trogon* and *Tityra*, which pass farther up the low coast-lands constituting the "*tierra caliente*" of Mexico. As far as our present knowledge goes, but one species of *Calliste* has yet been met with within the limits of the Mexican States, namely, *Calliste larvata*,

which, however, appears to be more plentiful in Honduras and Central America. Just above the Isthmus of Panama two others occur, one (*C. francescæ*) only doubtfully distinct from *C. larvata*, the other (*C. gyroloides*) having a much wider range than is usual in this group. In the mountain valleys of New Grenada, which is our next locality southwards, we seem to have passed at once to the metropolis of the genus, no less than seventeen species, as may be seen by reference to the Table of geographical distribution hereafter given, occurring in this country. Nowhere else do these birds seem to be so abundant. In the province of Quixos, on the eastern slope of the Ecuadorian Andes, we find only eight,—on the opposite or western side only six species; but there is little doubt that these districts, when properly worked out, will supply us with others. From the eastern wood-region of Peru we are already acquainted with twelve *Callistæ*, and more, it is likely, remain to be discovered. The same is probably the case in Cisandean Bolivia, where we know at present of seven species. On the western slope of the Peruvian and Bolivian Andes, not a single one has been found. In Paraguay we seem to have arrived nearly at the southern limit of the genus in that direction, for only two *Callistæ* are met with here. Both of these also occur in Southern Brazil, together with six others, making a total of eight species resident in the latter country. From the more northern portion of the Brazilian empire, by which I mean the maritime provinces to the south of the Amazon, we are at present only acquainted with one peculiar species, and one other common to Cayenne; but there are doubtless several others which could be added to the list, if the zoology of this country were properly known. Higher up the Amazon, in the Brazilian province of Rio Negro, we have at least three species, two of which are common to Guiana and Cayenne, where the total amounts to five or six in number. Lastly, in Venezuela no less than eight *Callistæ* are found, most of which have been brought from the elevations of the Venezuelan Andes, which run parallel to the northern coast, and one only from the vast flat plains which are traversed by the Orinoco. Two of the Venezuelan species appear to extend along the coast-range into the island of Trinidad, and there is a single species or well-marked local variety, which seems to be confined to that island.

Such is a summary account of our present knowledge of the geographical distribution of the Tanagers of the genus *Calliste*. There are

many wide gaps to be filled up before our information on this subject can be considered in any degree complete. Still less perfect is our knowledge on many other points connected with the history of this genus of birds. We are at present utterly ignorant of all that regards their propagation, nidification and internal structure, and in reality we know merely such facts concerning them as can be deduced from the examination of their dried skins. I cannot conclude this prefatory statement better than by calling attention to these deficiencies in our knowledge, and by reminding those, who have opportunities of observing these and other animals in their native wilds, how much it is in their power, by observations on these and similar points, to increase our knowledge of the wonderful and varied productions of Nature.

SCHEMA GENERUM TANAGRINORUM.



CALLISTARUM SCHEMA GEOGRAPHICUM.

	Central America.	New Grenada.	Quixos in Ecuador.	Vicinity of Quito.	Eastern Peru.	Cisandean Bolivia.	Paraguay.	Southern Brazil	Northern Brazil	Prov. Rio Negro	Cayenne.	Brit. Guiana.	Trinidad.	Venezuela.
1. *tatao*	...	...	...	...	...	...	...	...	...	*	*	*	...	...
2. *cœlicolor*	...	*	...	...	...	...	...	...	...	...	...	...	...	...
3. *yeni*	...	...	...	...	*	*	...	...	...	...	...	...	...	...
4. *tricolor*	...	...	...	...	...	...	...	*	...	...	...	...	...	...
5. *fastuosa*	...	...	...	...	...	...	...	...	*	...	...	...	...	...
6. *festiva*	...	...	...	...	...	...	...	*	...	...	...	...	...	...
7. *cyaneiventris*	...	...	...	...	...	...	...	*	...	...	...	...	...	...
8. *thoracica*	...	...	...	...	...	...	...	*	...	...	...	...	...	...
9. *schranki*	...	...	*	...	*	*	...	...	...	...	...	...	...	...
10. *punctata*	...	...	...	...	...	...	...	...	...	...	*	...	...	...
11. *guttata*	...	...	...	...	...	...	...	...	...	...	...	*	*	*
12. *xanthogastra*	...	*	*	...	*	...	...	...	...	...	...	...	...	...
13. *graminea*	...	...	...	...	...	...	...	...	...	...	*	...	...	...
14. *rufigularis*	...	...	...	*	...	...	...	...	...	...	...	...	...	...
15. *aurulenta*	...	*	...	*	...	...	...	...	...	...	...	...	...	...
16. *sclateri*	...	*	...	...	...	...	...	...	...	...	...	...	...	...
17. *pulchra*	...	...	*	...	*	...	...	...	...	...	...	...	...	...
18. *arthusi*	...	...	...	...	...	...	...	...	...	...	...	...	...	*
19. *icterocephala*	...	...	...	*	...	...	...	...	...	...	...	...	...	...
20. *vitriolina*	...	*	...	...	...	...	...	...	...	...	...	...	...	...
21. *cayana*	...	...	...	...	...	...	...	...	...	...	*	*	...	...
22. *cyanolæma*	...	...	...	...	...	...	...	...	...	*	...	...	...	...
23. *cucullata*	...	...	...	...	...	...	...	...	...	...	...	...	...	*
24. *flava*	...	...	...	...	...	...	*	*	...	...	...	...	...	...
25. *pretiosa*	...	...	...	...	...	...	*	*	...	...	...	...	...	...
26. *melanonota*	...	...	...	...	...	...	...	*	...	...	...	...	...	...
27. *cyanoptera*	...	...	...	...	...	...	...	...	...	...	...	...	...	*
28. *gyrola*	...	...	...	...	...	...	...	...	...	...	*	*	...	...
29. *gyroloides*	*	*	*	...	*	*	...	...	...	...	...	...	...	...
30. *desmaresti*	...	...	...	...	...	...	...	...	...	...	...	...	*	*
31. *brasiliensis*	...	...	...	...	...	...	...	*	...	...	...	...	...	...
32. *flaviventris*	...	...	...	...	...	...	...	...	*	*	*	*	...	...
33. *vieilloti*	...	...	...	...	...	...	...	...	...	...	...	...	*	...
34. *boliviana*	...	*	...	...	*	*	...	...	...	...	...	...	...	...
35. *atricærulea*	...	...	...	...	*	*	...	...	...	...	...	...	...	...
36. *ruficervix*	...	*	...	*	...	...	...	...	...	...	...	...	...	...
37. *atricapilla*	...	*	...	...	...	...	...	...	...	...	...	...	...	*
38. *argentea*	...	...	...	...	*	...	...	...	...	...	...	...	...	...
39. *nigriviridis*	...	*	...	*	...	...	...	...	...	...	...	...	...	...
40. *cyanescens*	...	...	...	...	...	...	...	...	...	...	...	...	...	*
41. *larvata*	*	...	...	...	...	...	...	...	...	...	...	...	...	...
42. *francescæ*	...	*	...	...	...	...	...	...	...	...	...	...	...	...
43. *nigricincta*	...	*	*	...	*	...	...	...	...	...	...	...	...	...
44. *cyaneicollis*	...	*	*	...	*	*	...	...	...	...	...	...	...	...
45. *labradorides*	...	*	...	...	...	...	...	...	...	...	...	...	...	...
46. *rufigenis*	...	...	...	...	...	...	...	...	...	...	...	...	...	*
47. *parzudakii*	...	*	*	...	...	...	...	...	...	...	...	...	...	...
48. *lunigera*	...	...	...	*	...	...	...	...	...	...	...	...	...	...
49. *chrysotis*	...	...	...	...	*	...	...	...	...	...	...	...	...	...
50. *xanthocephala*	...	...	...	...	*	*	...	...	...	...	...	...	...	...
51. *venusta*	...	*	*	...	...	...	...	...	...	...	...	...	...	...
52. *inornata*	...	*	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	2	17	8	6	12	7	2	8	2	3	6	5	3	8

1. Calliste tatao. 2. Calliste cœlicolor.

CALLISTE TATAO.

THE PARADISE TANAGER.

PLATE I. Fig. 1.

Tangara du Brésil .... *Buff.* Pl. Enl. 127. fig. 1.

Tangara ..... *Buff.* Pl. Enl. 7. fig. 1 (fig. pess.).
Briss. Orn. iii. p. 3.

Le Septicolor..... *Buff.* H. N. iv. 278.

Tanagra tatao..... *Linn.* S. N. i. 315—*Gm.* S. N. i. 893.
Lath. Ind. Orn. i. 428.
Kittl. Küpf. d. Vög. pl. 31. fig. 3.
Vieill. Enc. Méth. p. 778.
Hayes, Osterly Park, p. 32.
d'Orb. Voy. p. 270?

Aglaia tatao ..... *Lafr.* et *d'Orb.* Syn. Av. in Mag. de Zool. 1837, p. 32?

Aglaia paradisea..... *Sw.* Class. Birds, ii. p. 286.

Callispiza tatao ..... *Schomb.* Reise, iii. p. 669.
Cab. Mus. Hein. p. 26.

Tatao paradisea..... *Bp.* Note s. l. Tang. p. 15; Rev. Zool. 1851, p. 141.

Calliste tatao ..... *Gray,* Gen. B. p. 366. sp. 13.
Bp. Consp. p. 234. sp. 13.
Sclater, Cont. Orn. 1851, p. 50; Tan. Cat. Sp. p. 11. sp. 1.

Tangara septicolor.... *Desm.* Tan. pl. 1.

The Paradise Tanager, *Lath.* G. H. vi. p. 27.

Titmouse of Paradise, *Edwards,* Glean. t. 349.

Mas adultus. Suprà velutino-ater: dorsi postici parte superiore coccineâ, inferiore aureâ: pilei summi et capitis laterum pennis coarctatis et squamatis, colore lætissimè viridibus: fronte et oculorum ambitu angustè nigris: tectricibus alarum summis et corpore subtus splendidè cæruleis; gutture et pectore summo cum tectricibus alarum mediis et marginibus remigum externarum purpureis: ventre medio crissoque atris: long. tota 4·7, alæ 2·7, caudæ 2·0 poll. Angl.

Mas junior et fœmina. Mari similis, sed coloribus minùs vividis; dorso postico omninò aureo.

The "Paradise Tanager" was well known to Brisson and Buffon, like many other of the birds of Cayenne, some of which have not

been again recognized since their day. In the present case, however, we are more fortunate, this beautiful species being very common in collections from that country, and to be found in almost every museum. But we have gained very little additional information concerning its habits during the last century. Buffon tells us that it arrives in flights from the interior in the inhabited districts of Cayenne for the purpose of feeding on the fruit of certain trees, and does not make a long stay. Schomburgk, who is the sole modern observer who speaks of it, found it only in the Roraima mountains in the interior of British Guiana, on the highest trees, passing in flights from one tree to another. Mr. Wallace collected specimens of this bird on the upper Rio Negro; so it doubtless extends throughout the mountain-range of Guiana to the banks of that river. M. d'Orbigny speaks of having observed this Tanager near Rio in Brazil, but I have no doubt he has made some error in the species, as I have never seen or heard of its occurrence in the very numerous collections brought from that quarter, or indeed anywhere except in the countries already indicated as its habitat.

The specific name '*tatao*' applied to this bird by Linnæus was adopted from Seba's '*Avicula de tatao*,' Thesaur. i. p. 96. pl. 60. fig. 6. But Seba's figure certainly does not represent this species, and is more probably referable to *Calliste punctata*.

The "Planches Enluminées" contain two representations intended for this Tanager. One of them (Pl. Enl. 127. fig. 1) is not worse than the generality of these figures, but the other (Pl. Enl. 7. fig. 1) has the tail altogether wrongly coloured.

CALLISTE CŒLICOLOR.

THE NEW GRENADIAN PARADISE TANAGER.

PLATE I. Fig. 2.

Calliste cœlicolor .... *Sclater*, Cont. Orn. 1851, p.51; Tan. Cat. Sp. p.11. sp.3; P. Z.S. 1855, p. 157; List of Bog. B. p. 29.

Mas adultus. Suprà velutino-ater: dorsi postici parte superiore coccineâ, inferiore aureâ: pilei usque ad nucham et capitis laterum pennis coarctatis et squamatis, colore lætissimè viridibus: fronte angustissimâ et oculorum ambitu nigris: tectricibus alarum summis et corpore subtùs splendidè cæruleis: gutture cum tectricum alarum mediarum et remigum externarum marginibus purpureis: ventre medio et crisso atris: long. tota 5·0, alæ 3·1, caudæ 2·1 poll. Angl.

Mas junior et fœmina. Mari similis, sed coloribus obscurioribus et dorso postico omninò flavo.

Quite a new country was opened to European naturalists when collections began to be made in the mountain valleys of New Grenada. It is now nearly twenty years since birdskins were first transmitted to Paris from Bogota, the capital of that republic. Since then frequent importations of objects of natural history as articles of merchandize have been made both into England and France from the same quarter.

The zoology of this country, thus revealed to us, was found, as might naturally have been expected, to be wholly distinct from that of the eastern coasts of South America, with which we were so familiar, and a large number of new Mammals, Birds, Insects and other animals were thus added to our catalogues. The Bird-fauna of these regions appears to be particularly prolific, not only abounding in new species, but also embracing novel forms not met with in other parts of the South American continent. Last year I enumerated in a paper read before the Zoological Society of London no less than 435 species of birds which occur in collections of what are commonly called '*Bogota*' skins. Since that time many others have come under my notice, and I have little doubt that their numbers will eventually be very materially increased.

The brilliant group of Tanagers play an important *rôle* in this peculiar ornithology, as many as ninety species occurring in Bogota collections : and no genus among them seems better developed here than *Calliste*, of which sixteen or seventeen different species are frequently to be met with in the importations of birdskins from this quarter.

As is the case with the large majority of the *Passeres* of these regions, not one of these *Callistæ* is specifically identical with the corresponding bird of the same genus found on the eastern coast of the continent ; although the present species, it must be allowed, is very closely allied to the *Calliste tatao* of Cayenne, and by some naturalists, perhaps, would be treated only as a local variety of that bird. But, as it may always be distinguished from the true *tatao* by seemingly invariable differences, although these are minute, I think that it has a fair claim to a distinct specific title, many other birds now generally recognized as valid species resting on characters not of greater importance.

The *Calliste cœlicolor* is always rather larger in size and longer in the wing than the *tatao*, and is, if possible, still brighter in its colouring. The curious scaly green feathers of the head extend farther forwards over the front (leaving merely a very narrow edging of black close to the bill), and farther backwards towards the nape than in the older species, and the purple below is confined to the throat, not passing over the upper breast, as in that bird. In the present species also the smaller wing-coverts are nearly wholly thalassine blue, like the belly, having only a narrow lower margin of purple. In the other bird the purple colouring occupies more space, and the thalassine blue covers merely the bend of the wing.

I first pointed out these differences, indicating them as likely to form grounds for the specific separation of the New Grenadian bird, and in such case proposing for it the name '*cœlicolor*,' in a Synopsis of the genus Calliste, written in Sir William Jardine's 'Contributions to Ornithology' for 1851. Prince Bonaparte, in his "Note sur les Tangaras," published about the same time in the Revue Zoologique, also notices this bird as a variety of the '*tatao*.' Since that period I have seen a considerable number of examples of it, and am further convinced of its claims to be considered as an independent species.

Cuvier del. Lith. Bocquet fr. Paris.

Calliste yeni.

CALLISTE YENI.

THE RED-BACKED PARADISE TANAGER.

PLATE II.

Aglaia chilensis ..... *Vig.* P. Z. S. 1832, p. 3.
Jard. et *Selb.* Ill. Orn. n. s. pl. 25.

Aglaia yeni..... *Lafr.* et *d'Orb.* Syn. Av. in Mag. de Zool. 1837, p. 31.

Tanagra yeni ..... *d'Orb.* Voy. p. 270. pl. 24. fig. 2.

Callospiza yeni ..... *Tsch.* Wiegm. Arch. 1844, p. 286.
Tsch. F. P. p. 201.

Calliste chilensis .... *Gray*, Gen. p. 366. sp. 14.

Calliste yeni ..... *Bp.* Consp. p. 234.
Sclater, Cont. Orn. 1851, p. 51; Tan. Cat. Sp. p. 11. sp. 2.

Tatao yeni ..... *Bp.* R. Z. 1851, p. 141; Note s. l. Tang. p. 15.

Mas adultus. Supra velutino-ater: dorso postico toto ruberrimo: pilei et capitis laterum pennis coarctatis et squamatis, colore lætissimè viridibus: oculorum ambitu angustè nigro: tectricibus alarum summis et corpore subtus splendidè cæruleis; gutture et tectricum alarum mediarum et remigum externarum marginibus purpureis: ventre medio et crisso nigris: long. tota 5·2, alæ 2·9, caudæ 2·2 poll. Angl.

The well-known ornithologist, Mr. Vigors, first described the Red-backed Paradise Tanager before the Zoological Society in 1832, and called it '*chilensis*,' supposing it to be a native of the republic of Chili. But, now that we have become better acquainted with the ornithology of South America, we are well aware that the true tanagrine form is not found on the western slope of the Andean range nearly so far south as that country; and we cannot therefore use the name '*chilensis*' for a bird, which, as M. d'Orbigny remarks, does not occur within 100 leagues of that republic, and only on the opposite side of the Andes.

M. d'Orbigny met with this species in the hot humid forests of the Yungas and Yuracarès Indians in Bolivia. He says that, like all the true Tanagers, it keeps to the summit of the large trees and

palms in flights, composed of members of its own species, or mixed up with individuals of *Calliste schranki*, *Calliste cyaneicollis*, and other birds of this genus. The Yuracarès Indians call it "*yeni yeni*," from its peculiar call-cry; whence MM. Lafresnaye and d'Orbigny gave its present scientific name.

Von Tschudi found this Tanager in the hot wood-region of Eastern Peru, and the collections formed by Mr. Hawxwell on the Ucayali in 1852 likewise contain examples of it; so that we may assume that it ranges over the whole of the vast wood-regions of Peru and Bolivia, representing in these parts the *Calliste tatao* of Guiana, and the *Calliste cœlicolor* of New Grenada.

It may be easily distinguished from both these species, which in general colouring it closely resembles, by its pure brilliant red lower back.

I am not acquainted with the female of this Tanager, but believe it will be found to differ very little from the male.

Oudart del.

Lith. Becquet fr. Paris.

Calliste tricolor.

CALLISTE TRICOLOR.

THE GREEN-HEADED TANAGER.

PLATE III.

Tang. cayanensis varia chlorocephalos, *Briss.* Orn. vi. App. p. 59.
Tang. varié à tête verte, *Buff.* Pl. Enl. 32. fig. 1 (♂).
Le tricolor ..... *Buff.* H. N. iv. 276 (partim).
Tanagra tricolor..... *Gm.* S. N. 1. 891.
Lath. Ind. Orn. 1. 428.
Vieill. Enc. Méth. p. 779.
Temm. Pl. Col. 215. fig. 1 (♀).
Tanagra tatao..... *Max.* Beitr. iii. 459.
Calliste tricolor ..... *Gray*, Gen. p. 366. sp. 1.
Bp. Consp. p. 234.
Sclater, Cont. Orn. 1851, p. 51; Tan. Cat. Sp. p. 11. sp. 4.
Callispiza tricolor .... *Cab.* Mus. Hein. p. 26.
Tatao tricolor..... *Bp.* R. Z. 1851, p. 141; Note s. l. Tang. p. 16.
Tangara tricolor mâle . *Desm.* Tan. pl. 3.
Green-headed Tanager, *Lath.* G. H. vi. p. 24.

Mas adultus. Læte viridis: rostri ambitu et collo antico interscapulioque nigris: capite undique et vittâ gulam summam transeunte lætè cærulescenti-viridibus: pectore cæruleo: dorsi postici parte superiore flammeâ: tectricibus alarum superioribus purpureis: rostro et pedibus nigris: long. tota 5·2, alæ 2·7, caudæ 2·1.

Fœmina et mas junior. Mari adulto similis, sed coloribus omnibus obscurioribus; dorso postico flavo.

The *Calliste tricolor* is one of the best known of the present group of Tanagers, being imported in great numbers to this country from Rio and Bahia. I have frequently seen large drawers full of bird-skins in the shops of the London dealers composed solely of individuals of this species and of *Calliste festiva* and *Calliste thoracica.*

Though confounded by the older authors with *Calliste festiva,* and by others with the *tatao,* it is, I need hardly observe, quite distinct from both of them, and indeed from every other member of this genus.

That most accurate observer, Maximilian, Prinz zu Wied, who gives an excellent description of this bird under the latter name, met with it very commonly in the neighbourhood of Rio de Janeiro and Cabo Frio in South-east Brazil, but not farther northwards. He says it has no song, but only a short weak call-cry. "In the neighbourhood of the *Fazenda* of *Guirapina*, and in the environs of the *Lagoa* of *Ponta Negra*, also near *Marica* and by *Campos* in the vicinity of the river *Parahyba*," observes this writer, "these beautiful birds are excessively common. They are by no means shy, and, like other Tanagers out of the breeding-season, are united in small flights, passing from one fruit-tree to another, and paying particular attention to the orange-trees."

The Prince did not acquire any information concerning the nesting of this bird. We are told that it is often kept in cages by the Brazilians on account of its beautiful plumage.

There are no generally accessible published figures of this Tanager except the somewhat insufficient representations of Buffon and Desmarest. Temminck, however, gives a tolerable plate of the female in his "Planches Coloriées."

Oudart del. Lith. Becquet fr. Paris.

Calliste fastuosa.

CALLISTE FASTUOSA.

THE SUPERB TANAGER.

PLATE IV.

Tanagra fastuosa .... *Less.* Cent. Zool. pl. 58. p. 184.

Calliste fastuosa..... *Gray*, Gen. p. 366. sp. 20.
Bp. Consp. p. 235.
Sclater, Cont. Orn. 1851, p. 52; Tan. Cat. Sp. p. 11. sp. 6.

Tatao fastuosus ..... *Bp.* R. Z. 1851, p. 142; Note s. l. Tang. p. 16.

Mas adultus. Fronte, mento, gutture medio et interscapulio velutino-nigris: dorso postico aurantiaco: capite et cervice totâ cum vittâ gulam transeunte lætissimè cæruleo-viridibus: alis caudâque nigris, purpureo marginatis: tectricibus alarum minoribus lætissime cæruleis: secondariarum trium ultimarum marginibus externis pallidè aureis: abdomine toto purpureo, pectore lilacescente: long. tota 5·5, alæ 2·8, caudæ 2·0.

Fœmina. Mari similis, nisi capite viridescentiore cæruleo.

There is very little information, I regret to say, to communicate concerning this Tanager, which is certainly one of the most brilliantly coloured of the group. It is not very common in collections. The British and Paris Museums have long contained examples, but the bird was otherwise not generally well known until M. Parzudaki, of Paris, a short time since received several examples from Pernambuco. We conclude, therefore, that this part of Brazil is its native country, and that it does not range much farther south, as it is never met with among the birdskins so largely imported now-a-days from Bahia and Rio di Janeiro.

Lesson, who first described and figured this Tanager in his "Centurie Zoologique," merely mentions Brazil as its habitat, and gives us no further intelligence concerning it.

The curious golden spots on the extremities of the outer secondaries serve to distinguish this *Calliste* from every other member of the genus.

Oudart del.

Lith. Becquet fr. Paris.

Calliste festiva.

CALLISTE FESTIVA.

THE RED-NECKED TANAGER.

PLATE V.

Tang. cayanensis varia cyanocephalos, *Briss.* Orn. vi. App. p. 62.

Tang. à tête bleue de Cayenne, *Buff.* Pl. Enl. 33. fig. 2 (♂).

Le tricolor ..... *Buff.* H. N. iv. p. 276 (partim).

Tanagra tricolor, var. β, *Gm.* S. N. 892.
Don. Nat. Rep. pl. 23.

Tanagra festiva ..... *Shaw*, Nat. Misc. pl. 537.

Tanagra cyanocephala, *Vieill.* N. D. d'H. N. xxxii. p. 425; Enc. Méth. p. 780.
Temm. Pl. Col. 215. fig. 2 (♀).

Tanagra trichroa .... *Licht.* Verz. d. Doubl. p. 30.
Kittl. Küpf. d. Vög. pl. 31. fig. 1.

"Tanagra rubricollis.. *Temm.*" Max. Beit. iii. 456.

Aglaia cyanocephala .. *Sw.* Orn. Dr. pl. 5.

Calliste festiva ..... *Gray*, Gen. p. 366. sp. 2.
Bp. Consp. p. 234.
Sclater, Cont. Orn. 1851, p. 51; Tan. Cat. Sp, p. 11. sp. 6.

Callispiza festiva .... *Cab.* Mus. Hein. p. 26.

Tatao festiva ..... *Bp.* R. Z. 1851, p. 142; Note s. l. Tang. p. 16.

Tangara tricolor, femelle, *Desm.* Tan. pl. 4.

Green-headed Tanager, var. A. *Lath.* G. H. vi. p. 25.

Mas adultus. Lætè viridis: rostri ambitu et interscapulio nigris: pileo toto nuchâque cum gutture cæruleis: oculorum ambitu et pilei cærulei margine anticâ thalassinis: regione auriculari cum collo laterali et postico latè rubris: alis caudâque nigris viridi limbatis; tectricibus alarum minoribus nigris aurantio terminatis: alis caudâque nigris: long. tota 5·0, alæ 2·5, caudæ 1·9 poll. Angl.

Fœmina. Mari similis, sed coloribus dilutioribus; dorso viridi nigro variegato.

Although Brisson clearly distinguished this bird from the *Calliste tricolor*, and described it under a different name, it was carelessly referred by several subsequent authors to a variety of that species;

a fate, from which its conspicuously different plumage ought to have saved it.

The consequence was that this unfortunate Tanager received no less than four specific appellations from different writers, who all thought themselves first in discovering that it was really distinct from *Calliste tricolor*. Our countryman, Shaw, was the earliest of these authors, having called this bird '*festiva*' in his "Naturalist's Miscellany" in 1804, and we consequently employ his name for the species.

As I have already mentioned, in speaking of *Calliste tricolor*, it is very commonly imported into England in collections of Brazilian skins, and examples of it are contained in almost every cabinet of Natural History.

Prince Maximilian of Neuwied, who describes this bird in his "Beiträge zur Naturgeschichte von Brasilien" under the name of *Tanagra rubricollis*, found it near Cabo Frio in the vicinity of the Fazenda of Guirapina in South-east Brazil, but did not consider it common in those parts, since his hunters only procured one example during his whole journey. This, he says, was passing from branch to branch in a deep wood, and seemed to have the usual habits of the true Tanager.

This *Calliste* is recognizable at first glance from among all other members of the group by its broad red collar, which begins on each side of the throat and passes all round the back of the neck.

Pucheran del. Lith. Becquet fr. Paris.

Calliste cyaneiventris.

CALLISTE CYANEIVENTRIS.

THE BLUE-BREASTED TANAGER.

PLATE VI.

Tanagra cyanoventris.. *Vieill.* N. D. d'H. N. xxxii. p. 426; Enc. Méth. p. 781.

Tanagra elegans..... *Max.* Reise n. Bras. i. p. 187.

Tanagra citrinella .... *Temm.* Pl. Col. 42. fig. 2.
Max. Beitr. iii. p. 464.

Aglaia citrinella..... *Sw.* Orn. Dr. pl. 6.

Calliste citrinella .... *Gray*, Gen. p. 366. sp. 3.
Bp. Consp. p. 234.

Callispiza citrinella.... *Cab.* Mus. Hein. p. 26.

Chrysothraupis citrinella, *Bp.* R. Z. 1851, p. 142; Note s. l. Tang. p. 17.

Calliste cyanoventris.. *Sclater*, Cont. Orn. 1851, p. 54; Tan. Cat. Sp. p. 11. sp. 7.

Mas adultus. Suprà aureo-flavus; dorso superiore et medio nigro variegatis: alis caudâque nigris viridi limbatis: infrà nitidè cyaneus, mento summo et collo antico nigris: vittâ gulam summam transeunte aureâ, capite concolore: ventre medio crissoque ochracescenti-flavis viridi perfusis: rostro nigro: pedibus fuscis: long. tota 5·25, alæ 2·7, caudæ 2·1 poll. Angl.

Fœmina. Mari similis, sed coloribus dilutioribus.

Vieillot's description of this Tanager given in the "Nouveau Dictionnaire d'Histoire Naturelle," and subsequently in his continuation of the "Encyclopédie Méthodique," has been, until lately, very generally overlooked, and Temminck's designation—the most recent of all in point of date—is the one usually employed for this species. The bird, although occasionally met with in collections of Brazilian skins, is not nearly so abundant as *Calliste tricolor, festiva* and *thoracica.*

Prince Maximilian of Neuwied, who mentions it in his "Reise nach Brasilien" under the name *Tanagra elegans,* but afterwards rejected his own appellation in favour of Temminck's, tells us that he met with it first in the deep forests on the river Jucú, which flows into the

sea a little to the south of the mouth of the Rio do Espiritu Santo in the province of the same name. Temminck's figure, which is tolerably exact, was taken from Prince Maximilian's specimens.

Examples of this species in the fine series of South American birds in the Imperial Cabinet of Natural History at Vienna were collected by the celebrated traveller and naturalist Natterer at Ipanema in the province of S. Paolo.

The plumage of this Tanager is rather peculiar, and renders it easily recognizable among its congeners. The upper surface, from the black front to the tail-coverts, is of a golden-yellow, the whole space between the wings being variegated with black, caused by the feathers being medially black and edged on each side with golden-yellow. This prevalence of yellow is what I suppose has led Prince Bonaparte to arrange it in the section of the genus which he denominates *Chrysothraupis*, which includes *C. aurulenta*, *arthusi* and their affines; but I consider that the bird is certainly much more nearly allied to *Calliste tricolor* and others of the preceding species.

Calliste thoracica.

CALLISTE THORACICA.

THE YELLOW-BREASTED TANAGER.

PLATE VII.

Tanagra thoracica .... *Temm.* Pl. Col. 42. fig. 1.

Calliste thoracica .... *Gray*, Gen. p. 366. sp. 4.
Bp. Consp. p. 234.
Sclater, Cont. Orn. 1851, p. 54; Tan. Cat. Sp. p. 11. sp. 11.

Callispiza thoracica .. *Cab.* Mus. Hein. p. 26.

Chrysothraupis thoracica, *Bp.* R. Z. 1851, p. 142; Notes s. l. Tang. p. 17.

Mas adultus. Suprà nitidè viridis nigro variegatus: fronte nigrâ: regione oculari et vittâ pileum anticum transeunte thalassino-cyaneis: gutture et pectore toto aurantio-flavis, plagâ in gutture medio cum mento summo nigris: alis caudâque nigris viridi limbatis: tectricibus alarum summis nigris aurantio terminatis: abdomine nitidè viridi, hypochondriis cyaneo tinctis: ventre medio et crisso flavicantibus: rostro nigro: pedibus pallidis: long. tota 5·5, alæ 2·8, caudæ 2·4 poll. Angl.

Fœmina. Mari similis sed paulò minor; coloribus dilutioribus; hypochondriis viridibus.

This well-known species of Tanager was first described and figured by Temminck in his "Planches Coloriées," from specimens collected in South-east Brazil by Natterer. It is now very common in collections imported from that country; but I regret to say we have no information whatever concerning its habits, or any other particulars of it excepting what we can gather from examination of the dried skins.

Dr. Pucheran, in one of his admirable articles upon the types of the Paris Museum, states, that he thinks Vieillot's '*Tanagra desmaresti*' (Nouv. Dict. xxxii. p. 410; Enc. Méth. p. 774) is intended for the present species. I agree with Dr. Pucheran that this is very possible, but I hardly like even to quote as a synonym, much less to adopt as the first-given appellation of this species, a name depending

on a description so exceedingly inaccurate as that given by Vieillot, if it was meant for this bird; especially as the type itself is not forthcoming, so that we cannot be sure that he was referring to this species.

Prévost del.

Lith. Becquet frères.

Calliste schanki.

CALLISTE SCHRANKI.

SCHRANK'S TANAGER.

PLATE VIII.

Tanagra schrankii .... *Spix*, Av. Bras. ii. p. 38. pl. 51 (♂) et (♀).
d'Orb. Voy. p. 270. pl. 24. fig. 1.

Aglaia schrankii..... *Lafr.* et *d'Orb.* Syn. Av. in Mag. de Zool. 1837, p. 31.
Bp. P. Z. S. 1837, p. 122.

Aglaia melanotis..... *Sw.* An. in Men. p. 355 (♀).

Calliste schrankii .... *Gray*, Gen. p. 366. sp. 17.
Bp. Consp. p. 235. sp. 18.
Sclater, Cont. Orn. 1851, p. 54; Tan. Cat. Sp. p. 11. sp. 12; P. Z. S. 1854, p. 115.

Callospiza schrankii .. *Tsch.* Wiegm. Arch. 1844, p. 286, et F. P. p. 201.

Chrysothraupis schrankii, *Bp.* R. Z. 1851, p. 143; Note s. l. Tang. p. 17.

Mas adultus. Lætè viridis: interscapulii et secundariarum ultimarum pennis nigris, viridi marginatis: alis caudâque nigris cærulescenti-viridi limbatis: fronte latâ et capitis lateribus nigris: pileo postico aureo: dorso imo cum pectore et ventre summo medialitèr flavis: rostro et pedibus nigris: long. tota 4·6, alæ 2·7, caudæ 1·7 poll. Angl.

Fœmina. Mari similis, sed coloribus minùs vividis: capite viridi: uropygio flavicante.

Spix and Martius, to whom we owe so much for their discoveries in South American ornithology, extended their Brazilian travels high up into the regions of the Upper Amazon. There are consequently many species of animals, described in Spix's great works on Brazilian Zoology, which are more properly East-Peruvian forms, and which, if met with at all within the boundaries of Brazil, are only to be found near to the extreme western limits of the empire. Among such is the present Tanager, which appears to have a tolerably extensive range along the vast wood-region traversed by the head-waters of the numerous confluents of the Amazon. Beginning at the north, it occurs on the upper Rio Napo in the province of Quixos in Ecuador. Next we find it in all collections made in Eastern Peru, where Von

Tschudi noticed it with other *Callistæ* in the hot wood-region, from which country also Mr. Hawxwell has lately transmitted some beautifully-prepared specimens. Hence it passes to the south as far as Bolivia, where d'Orbigny and Bridges obtained examples which are now in the National Collections of England and France.

M. d'Orbigny informs us, in his "Voyage dans l'Amérique Méridionale," that he found this Tanager in the hot and damp forests of the country of the Yuracares Indians, at the foot of the Bolivian Andes, in large flights in company with *Calliste yeni*, and has given us an accurate representation of the male bird in the same work.

Oudart del. Lith. Bucquet frères.

Calliste punctata.

CALLISTE PUNCTATA.

THE SPOTTED TANAGER.

PLATE IX.

Tangara viridis indica punctata, *Briss.* Orn. iii. 19.

Tang. verd tacheté des Indes, *Buff.* Pl. Enl. 133. fig. 1.

Le Syacou ..... *Buff.* H. N. iv. p. 288.

Tanagra punctata .... *Linn.* S. N. i. 316.
Gm. S. N. i. 897.
Lath. Ind. Orn. i. 425.
Vieill. Enc. Méth. p. 779.

Calliste punctata..... *Gray*, Gen. p. 366. sp. 12.
Bp. Consp. p. 234. sp. 8.
Sclater, Cont. Orn. 1851, p. 55; Tan. Cat. Sp. p. 11. sp. 14.

Callispiza punctata.... *Cab.* Mus. Hein. p. 26.

Ixothraupis punctata .. *Bp.* R. Z. 1851, p. 143; Note s. l. Tang. p. 18.

Spotted Green Titmouse, *Edwards*, Glean. vi. pl. 262.

Tangara syacou ..... *Desm.* Tan. pl. 8 et 9.

Mas adultus. Suprà læte viridis: capitis et dorsi superioris pennis medialitèr nigris viridi marginatis: alis caudâque nigris viridi limbatis: loris nigris: fronte angustâ et ciliis oculorum albescentibus: subtùs albus, viridi tinctus et nigro guttatus, lateraliter paulùm flavescens: ventre medio albo: hypochondriis viridibus: crisso flavicante: rostro et pedibus nigris: long. tota 4·6, alæ 2·5, caudæ 1·6 poll. Angl.

Fœmina. Minor et obscurior: guttis corporis inferi pænè obsoletis.

All the examples of this Tanager that have come under my notice have been Cayenne skins, which are always easily recognizable among other South American bird-skins by the peculiarity of their preparation.

This is, in fact, one of the many species of birds described and figured nearly a century ago by Brisson and Buffon as inhabitants of that country, regarding which we have obtained very little additional knowledge up to the present day.

Buffon gives us no information concerning this Tanager except

that it is rather rare in Cayenne, and in his "Histoire Naturelle" unites to it under the common title of '*Le Syacou*' another closely-allied species, the *Calliste graminea*, of which he has given a separate figure in the "Planches Enluminées" under a different name. Nor does this bird appear to have been noticed by any other writer on natural history as being found in any of the neighbouring countries,—Schomburgk's *Callospiza punctata* from British Guiana, where we might have reasonably expected this Tanager to occur, being, as we shall hereafter see, referable to the following species.

This bird may be readily distinguished from *Calliste guttata*, which is its closest ally, by its rather smaller size and the absence of the golden-yellow colour about the front and eye-region. It is also recognizable among all the members of the group, from having the edgings of the wings plain green, not tinged with blue.

Vadart del. Lith. Becquet frères.

Calliste guttata.

CALLISTE GUTTATA.

THE SPOTTED EMERALD TANAGER.

PLATE IX.

Spotted Emerald Tanager, *Lath.* G. H. vi. 19.

Callospiza punctata ... *Cab.* in Schomb. Reise, iii. p. 669.

Callispiza guttata .... *Cab.* Mus. Hein. p. 26.

Calliste guttulata .... *Bp.* Compt. Rend. Ac. Sc. Par. xxxii. p. 76. *Sclater,* Tan. Cat. Sp. p. 11. sp. 13; P. Z. S. 1855, p. 157; List of Bog. B. p. 29.

Calliste chrysophrys .. *Sclater,* Cont. Orn. 1851, p. 24. pl. 69. fig. 2. et p. 54.

Ixothraupis guttulata . *Bp.* R. Z. 1851, p. 144; Note s. l. Tang. p. 18.

Mas adultus. Suprà aurescenti-viridis, capitis totius et dorsi superioris pennis medialitèr nigris, viridi marginatis: fronte et regione oculari aureis: alis caudâque nigris, hac viridi, illis autem cærulescenti-viridi latiùs marginatis: loris nigris: subtùs albus, cærulescente tinctus et guttis rotundis præcipuè in pectore perfusus; his maculis in gulâ minoribus: ventre medio albescente: lateribus et crisso flavo-virescentibus: rostro et pedibus nigris: long. tota 5·5, alæ 2·8, caudæ 2·0 poll. Angl.

Fœmina. Paulò minor et coloribus minùs claris.

Dr. Latham gives a very accurate description of this beautiful species of *Calliste* in his "General History of Birds," under the name of the "*Spotted Emerald Tanager,*" which I have accordingly adopted for its English designation. His specimens were from the island of Trinidad, whence I have also seen a considerable number of examples. About the priority of the English appellation of this Tanager, therefore, there can be no question; but as to what was its first-given Latin title, there is some difficulty in coming to a satisfactory decision. Prince Bonaparte, Dr. Cabanis and myself all recognized its distinctness from the true '*punctata*' of Cayenne about the same time, and each provided it with a distinct scientific name. I have hitherto generally awarded the preference to Prince Bonaparte,

supposing his name to have been first published. But I have lately ascertained that the sheets of Dr. Cabanis' "Museum Heineanum," comprising the Tanagers, were in the hands of many of his friends as early as October 1850, although the first part of that work was not issued to the public until the following year. I now therefore think it fair that his names for this and other species should take precedence over those published by Prince Bonaparte and myself in the beginning of the year 1851, and accordingly use the specific term *guttata* for this bird.

This Tanager is the most extensively distributed species of the little group to which it belongs. Schomburgk's examples were obtained in the Roraima mountains in British Guiana. I have already mentioned its occurrence in Trinidad; and the neighbouring land of Venezuela is also tenanted by it, Mr. Dyson having procured it near Caraccas, and M. Levraud, the French consul in that city, having also lately transmitted fine specimens of it to the Jardin des Plantes at Paris. In Bogota collections it is pretty abundant, and, although the examples from this quarter are not quite so brightly coloured as those from the low lands, I cannot but regard the bird as essentially the same. And, finally, M. Bourcier brought with him on his return from Ecuador a single example of this species, obtained in the tropical valley of Mindos to the north-west of Quito. This specimen, now in the Paris Museum, is the type of Prince Bonaparte's *Calliste guttulata*, and seems in every way to agree with ordinary examples, although, before I had examined it, the inaccuracy of Prince Bonaparte's description had occasioned me some doubts on this point.

Oudart del.

Lith. Becquet fr. Paris

Calliste xanthogastra.

CALLISTE XANTHOGASTRA.

THE YELLOW-BELLIED SPOTTED TANAGER.

PLATE XI.

Calliste xanthogastra.. *Sclater*, Cont. Orn. 1851, p. 23 et 55; Tan. Cat. Sp. p. 11. sp. 16; P. Z. S. 1854, p. 115, et 1855, p. 157; List of Bog. B. p. 29.

Ixothraupis chrysogaster, *Bp.* Rev. Zool. 1851, p. 144; Note s. l. Tang. p. 18.

Mas adultus. Læte viridis: capitis et corporis inferi ad medium pectus pennis medialitèr nigris, viridi latè circumcinctis: interscapulii, alarum et caudæ plumis nigris, cærulescenti-viridi latè marginatis: ventre medio flavo: lateribus viridibus: tectricibus subalaribus albis: rostro et pedibus nigris: long. tota 4·2, alæ 2·5, caudæ 1·5 poll. Angl.

This Tanager seems to be the representative of the homochroous group to which it belongs on the southern and eastern slope of the Andes of New Grenada, Ecuador and Peru. Although specimens have lately been transmitted in collections from Bogota, I think it probable that these were obtained on the south side of the watershed which divides the Magdalena from the upper branches of the Amazon, while the *Calliste guttata* represents it in the valleys on the northern side.

I distinguished this species from its affines and described it under its present name in the first number of Sir William Jardine's Contributions to Ornithology for 1851, published in the beginning of that year. Prince Bonaparte called the bird *chrysogastra* nearly about the same time, but I believe my name has a slight precedence in point of publication.

Besides its occurrence in Bogota collections, as already noticed, examples of this Tanager formed a part of the small but interesting series of birds received by Mr. Gould from the province of Quixos in Ecuador, of which I gave a list in the Proceedings of the Zoological Society for 1854. I may mention, that I have since found reason to

believe that this collection of birds, of which we were then unacquainted with the exact history, was formed by Don Villavicencio, a physician and naturalist, for some time resident at Porto del Napo, where the navigation of the Napo commences, of whom honourable mention is made in Osculati's "Esplorazione delle regione Equatoriali."

Examples of this Tanager are amongst the birds in the Leipsic Museum obtained by Pöppig in the province of Maynas in Peru; and Tschudi's Peruvian collection at Neufchatel also contains a single specimen, which, however, he does not appear to have distinguished from '*Calliste schranki*.'

CALLISTE GRAMINEA.

THE SMALL SPOTTED TANAGER.

PLATE XI.

Tang. tacheté de Cayenne, *Buff.* Pl. Enl. 301. fig. 1.
Le Syacou ..... *Buff.* H. N. iv. p. 288 (*partim*).
Tangara petit Syacou.. *Less.* Trait. d'Orn. p. 462.
Tanagra graminea .... *Spix,* Av. Bras. ii. p. 40. pl. 53. fig. 2 (♀).
Calliste virescens .... *Sclater,* Cont. Orn. 1851, p. 22. pl. 69. fig. 1, et p. 56.
Ixothraupis pusilla.... *Bp.* Rev. Zool. 1851, p. 144; Note s. l. Tang. p. 18.
Calliste graminea .... *Sclater,* Tan. Cat. Sp. p. 11. sp. 17.

Mas adultus. Viridis: alis caudâque nigris; harum marginibus externis cum interscapulio toto cærulescentibus: ventre medio vix flavescente: long. tota 3·9, alæ 2·3, caudæ 1·5 poll. Angl.

Fœmina. Viridis ferè unicolor: alis caudâque fusco-nigris, viridi limbatis; ventre flavescente.

Buffon's "*Tang. tacheté de Cayenne,*" figured in Pl. Enl. 301. fig. 1, is, I think, clearly intended for the present bird, although he himself, in his "Histoire Naturelle," and nearly all subsequent authors, have referred that illustration to the *C. punctata*. I also consider Spix's *Tanagra graminea* to be referable to the female of this species, and therefore adopt that name as its first-given specific title. I had once hoped to have settled this question satisfactorily by examining the type of Spix's figure, which was supposed to be in the Museum at Munich; but though I had the pleasure of seeing several of the types of the more obscure species figured in Spix's work, when on a visit to that capital in 1852, I was unsuccessful in finding the *Tanagra graminea*.

The greater part of the specimens of this Tanager which have come under my notice have been from Cayenne, although I possess one example, received from MM. Verreaux of Paris, marked "Brazil;" and it probably extends down to the banks of the Amazon, where I

suppose Spix's bird was obtained. In the Museum at Brussels I have observed this bird marked "*Tanagra herbacea,*" and at Neufchatel are some individuals from Surinam labelled "*Calospiza viridis,*" but both these names are, I believe, unpublished.

Prince Bonaparte's term '*pusilla*' is one of the most appropriate appellations for this bird, as it is the smallest of all the members of this genus at present known, although not much inferior in size to *Calliste xanthogastra*.

Calliste rufigula.

CALLISTE RUFIGULARIS.

THE RUFOUS-THROATED TANAGER.

PLATE XIII.

Tanagrella rufigula.... *Bp.* Compt. Rend. Ac. Sc. Par. xxxii. p. 77; Rev. Zool. 1851, p. 130; Note s. l. Tang. p. 4.

Calliste rufigula ..... *Sclater*, Cont. Orn. 1851, p. 55; Tan. Cat. Sp. p. 11.

Mas adultus. Suprà niger, interscapulii, alarum et caudæ pennis angustè viridi marginatis: dorso imo purè pallidè viridi: subtùs virescenti-albidus: pectoris et laterum pennis nigro guttatis: gulâ cuprescenti-rufâ: abdomine medio albido; crisso ochracescente: tectricibus subalaribus albis: rostro nigro, basi plumbescenti-albidâ: pedibus nigris: long. tota 4·5, alæ 2·7, caudæ 1·7 poll. Angl.

M. Jules Bourcier of Paris, the well-known Trochilidist, on his return from Quito in 1850, brought with him specimens of six or seven beautiful little species of Tanagers, which he had collected during his excursions into the tropical valleys of the Andes near that city. Several of these were new to science, and were described as such by Prince Bonaparte before the Academy of Natural Sciences of Paris in January 1851. The types of these species were deposited in the French National Collection, but a nearly complete set of duplicates passed into the hands of Mr. Edward Wilson, and are now, along with a large number of other specimens of Tanagers, the property of that gentleman, in my possession, having been most liberally entrusted to my care for the purpose of enabling me to work out this group with greater facility.

The *Calliste rufigularis*, one of M. Bourcier's new discoveries, but placed by Prince Bonaparte in the genus *Tanagrella*, seems to me to belong very naturally to the present section of the genus *Calliste*. Except for its dark-coloured head and coppery-brown throat, in which respect it differs from every other bird of the genus, it bears a very close similarity to *Calliste punctata*, and is in form, to my mind, quite a typical member of this group, and nowise related to the

birds with which Prince Bonaparte has arranged it. M. Bourcier only brought with him two examples of it, which he obtained in the hot tropical forests of *Calacali* to the north of Quito. One of these is in the Paris Museum, and the other, belonging to Mr. Wilson, and now in my hands, is ultimately, I believe, destined for the Museum of the Academy of Natural Sciences at Philadelphia.

The only other specimens of this bird in Europe I believe to be those in Sir William Jardine's collection. They were received by him from Professor Jameson of Quito, who has done so much to increase our knowledge of the natural history of that wonderful region, and first transmitted the *Tetragonops ramphastinus*, *Eugenia imperatrix*, and many other striking novelties in Ornithology, to this country.

1. Calliste sclateri. 2. Calliste aurulenta.

CALLISTE AURULENTA.

THE GOLDEN TANAGER.

PLATE XIV. Fig. 1.

T. (Aglaia) aurulenta.. *Lafr.* R. Z. 1843, p. 290, et 1854, p. 207.

Calliste aurulenta .... *Gray*, Gen. App. p. 17.
Bp. Consp. p. 235.
Sclater, Cont. Orn. 1851, p. 52 (*partim*); Tan. Cat. Sp. p. 11. sp. 8; P. Z. S. 1855, p. 157; List of Bog. B. p. 29.

Chrysothraupis aurulenta, *Bp.* R. Z. 1851, p. 142; Note s. l. Tang. p. 16.

Mas et fœmina. Aureus, pileo aurantio tincto: interscapulio nigro variegato: loris et regione auriculari nigerrimis: alis caudâque nigris: alarum tectricibus omnibus et secundariis virides-cente aureo limbatis; rectricum marginibus externis eodem colore vix tinctis: subtùs aureo-flavus: rostro et pedibus nigris: long. tota 5·0, alæ 2·8, caudæ 1·9 poll. Angl.

This beautiful golden-yellow Tanager was one of the many new species of Bogota birds described by Baron de Lafresnaye in the "Revue Zoologique," soon after the transmission of the first collections from the interior of New Grenada to Europe. Judging from the considerable number of examples which I have observed of it in such collections, the bird would seem not to be rare in that country; but, as is unfortunately the case with nearly all the animals which are found there, we have no information concerning its habits, nor do we even know the exact spot where it is found.

The only other locality from which I have seen this bird is the vicinity of Quito, whence Professor Jameson has transmitted some examples, which are in Sir William Jardine's collection. I should mention, that I have never made an accurate comparison between these and the New Grenadian bird; but they appeared to me to be the same, except that the Quito specimens seemed rather inferior in size.

In my Synopsis of this genus contained in Sir William Jardine's

Contributions to Ornithology for 1851, I confounded with this bird Tschudi's *Callospiza pulchra* and the following species, which has since been separated from the present by M. de Lafresnaye under the name of *Calliste sclateri*.

CALLISTE SCLATERI.

SCLATER'S GOLDEN TANAGER.

PLATE XIV. Fig. 2.

Calliste aurulenta .... *Sclater*, Cont. Orn. 1851, p. 52.

„ sclateri ..... *Lafr.* Rev. Zool. 1854, p. 207.
Sclater, P. Z. S. 1855, p. 157; List of Bog. B. p. 29.

Mas et fœmina. Suprà lætissime aureus, regione oculari citrino-flavâ: loris et regione auriculari nigerrimis: dorso nigro variegato: alis caudâque nigris: alarum tectricibus omnibus et secundariis viridescente aureo limbatis: rectricum mediarum marginibus externis eodem colore vix tinctis: subtùs saturatè brunnescenti-aureus: rostro et pedibus nigris: long. tota 5·5, alæ 3·1, caudæ 2·1 poll. Angl.

Although I give a separate figure and description of this Tanager, which the Baron de Lafresnaye has done me the honour to call after my name, I must confess I am not perfectly confident of the justice of its claims to be considered specifically distinct from the preceding bird. They are certainly very nearly allied to one another, and I have thought it convenient to place their figures both in one plate, in order that such differences as there are between them may be the more easily apparent.

It is quite true, as M. de Lafresnaye has conjectured in his article in the "Revue et Magasin de Zoologie," in which he first indicated this species, that the individual bird from which I took the short characters for *Calliste aurulenta*, given in my Synopsis of this genus published in 1851, was not a true *aurulenta*, but of this species, which I at that time regarded merely as a more fully coloured and probably adult bird.

The most striking difference between these two close allies is the dark chestnut or brown tinge of the whole lower surface in the present bird, which in the former species is golden-yellow. Also the *Calliste sclateri* is rather larger, and has the head of a brighter, clearer tinge, with no shade of orange colour, and the ocular region

of a lemon-yellow; while in the other species all these parts are of an orange-coloured yellow.

I have seen but comparatively few examples of this bird, and all these in collections received from S. Fé de Bogota.

Oudart del.

Lith. Becquet frères

Calliste pulchra.

CALLISTE PULCHRA.

TSCHUDI'S GOLDEN TANAGER.

PLATE XV.

Calospiza pulchra .... *Tschudi*, in Wiegm. Arch. x. pt. 1. p. 285; Faun. Per. p. 200. pl. 18. fig. 2.

Calliste pulchra ..... *Gray*, Gen. App. p. 17.
Bp. Consp. p. 235. sp. 32.
Lafr. Rev. et Mag. de Zool. 1854, p. 206.
Sclater, P. Z. S. 1856, p. 251.

Mas adultus. Aureo-flavus, interscapulio limonaceo-flavo et nigro variegato: fronte angustâ, mento summo, loris et regione auriculari cum alis caudâque nigerrimis: alarum tectricibus et secundariis viridescenti-aureo angustè limbatis: gutture et cervice anticâ castaneo-aureis: rostro et pedibus nigris: long. totâ 5·75, alæ 3·3, caudæ 2·4 poll. Angl.

Fœmina. Mari similis.

Dr. J. J. Von Tschudi, the well-known traveller and naturalist, was the discoverer of this beautiful species of the present section of Golden Tanagers. Its specific characters are given along with those of the other birds met with by him in Peru in the "Conspectus Avium," which appeared in Wiegmann's Archiv für Naturgeschichte in 1844, and some further details and a figure are published in the 'Fauna Peruana.' It is to be regretted that Von Tschudi was not a little more precise as to the exact localities in which he obtained the various birds which he collected. Of all the species of *Calliste* which he met with, including the present, we are only told that they occur in the eastern wood-region of Peru, in the provinces bordering on Brazil, and are to be found on the highest trees.

It was not until I had seen the type-specimens of this Tanager, which, along with the other animals collected by Von Tschudi, are now in the collection of the Gymnasium at Neufchatel, that I discovered its entire distinctness from *Calliste aurulenta*. In my Synopsis of *Callistæ* given in the 'Contributions to Ornithology,'

I had considered these two birds as identical. M. de Lafresnaye, however, has clearly pointed out the differences between them in his article in the 'Revue et Magasin de Zoologie' for 1854.

The *Calliste pulchra* may be distinguished from both the preceding species by its superior size, and by the golden-chestnut colouring of the throat and upper breast.

Mr. Gould has lately acquired examples of this bird from the Rio Napo, from one of which, by his kind permission, the accompanying illustration has been made. The presence of the bird in this locality seems to show that it ranges some distance north of Peru along the upper confluents of the Amazon which traverse the eastern slope of the Andes of Ecuador.

Oudart del. *Lith. Becquet frères*

Calliste arthusi.

CALLISTE ARTHUSI.

THE VENEZUELAN GOLDEN TANAGER.

PLATE XVI.

Tanagra arthus ..... *Less.* Ill. Zool. pl. 9.
Gray, Gen. p. 366. sp. 21.

Calliste arthus ..... *Bp.* Consp. p. 235. sp. 36.

Calliste arthusi ..... *Sclater*, Contr. Orn. 1851, p. 53; P. Z. S. 1856, p. 251.

Chrysothraupis arthus, *Bp.* Rev. et Mag. de Zool. 1851, p. 442; Note s. l. Tang. p. 16.

Mas adultus. Suprà lætissime aureus, rostri ambitu et regione auriculari nigris: interscapulio nigro variegato: alarum tectricibus et secundariis nigris virescenti-aureo limbatis: subtùs castaneus, gutture aureo: ventre medio pallidè flavo; rostro et pedibus nigris: long. totâ 5·7, alæ 3·0, caudæ 2·3 poll. Angl.

Fœmina. Mari similis.

M. Lesson first made known this Tanager to science as long ago as 1831, giving a sufficiently accurate figure of it in his work entitled 'Illustrations de Zoologie.' He indicates Mexico as its "*habitat*," which I have no doubt is quite erroneous. It is, in fact, a native of the wood-region of Venezuela, and does not appear to occur in any other part of the American continent, but seems to be the representative in that country of *C. aurulenta* and *sclateri* of New Grenada, and *C. pulchra* of Peru, to which it shows so much general resemblance in colouring. The first examples which came under my notice were procured by that enterprising traveller and collector, the late Mr. Dyson, on the estate of Curiana, near Cariaco, about 5000 feet above the sea-level. I have since seen occasional specimens among birds brought from Caraccas, but they are not of very common occurrence. A very fine collection of birds lately transmitted by M. Levraud, the French consul at Caraccas, to the Jardin des Plantes at Paris, comprised several of this species, and also examples of

Callistæ desmaresti, guttulata, cyanoptera and *cyanescens,* which may be taken to be the principal representatives of this genus in the circumjacent region.

The Venezuelan Golden Tanager may be distinguished from its allies by the dark chestnut colouring of the body below, varied by the pale yellow blotch in the middle of the belly, and golden throat.

I believe that in this and the other *Callistæ* belonging to the present section, the sexes are coloured very nearly alike.

Oudart del.

Lith. Bucquet fr. Paris.

Callisteicterocephala.

CALLISTE ICTEROCEPHALA.

THE SILVER-THROATED TANAGER.

PLATE XVII.

Calliste icterocephala.. *Bp.* Compt. Rend. Ac. Sc. Par. xxxii. p. 76.
Sclater, Contr. Orn. 1851, p. 53. pl. 70. fig. 1;
P. Z. S. 1856, p. 251.

Chrysothraupis icterocephala, *Bp.* Rev. et Mag. de Zool. 1851, p. 445;
Note s. l. Tang. p. 17.

Mas adultus. Flavus, interscapulio et tectricibus alarum superioribus nigro variegatis : alis caudâque nigris aurescenti-viridi limbatis : gutture et torque cervicali posticâ pallidè virescenti-argenteis : rostro et pedibus nigris : long. totâ 5·0, alæ 2·8, caudæ 1·9 poll. Angl.

Although the ornithic Fauna of the Quitian Andes shows considerable resemblance to that of the interior of New Grenada, many birds being common to both these regions, there are a considerable number of species which are, as far as we know at present, peculiar to the former district, and seem to have a very limited distribution. For instances I might mention the curious Capitonid lately discovered by Professor Jameson, *Tetragonops rhamphastinus*,—the beautiful shining-green Tanager, *Chlorochrysa phœnicotis*,—and the lovely Humming-bird figured by Mr. Gould in the tenth number of his Monograph of that family under the name *Eugenia imperatrix*. In the genus *Calliste* there are at least three species which as yet are only known to occur in the mountain-valleys in the vicinity of Quito,—the *Calliste rufigularis*, of which a figure has been already given, the present bird, and *Calliste lunigera*, which was described and figured in the Synopsis of *Callistæ* given in 'Contributions to Ornithology' for 1851. Like the *Calliste rufigularis*, the present bird was discovered by M. Bourcier during one of his excursions in search of Humming-birds, made in the neighbourhood of Quito, in the valley of Punta Playa. Only two examples, I believe, were brought by him to this country. One of these is in the French National Col-

lection, the other, at present under my care and the original of the accompanying illustration, is the property of Mr. Edward Wilson.

The Silver-throated Tanager is not likely to be confounded with any other member of the genus at present known to science. The peculiar bluish silver-like colouring of the throat, which extends in the shape of a narrow collar round the back of the neck, renders it easily distinguishable among its *confrères*.

Oudart del. Lith. Becquet frères.

Calliste vitriolina.

CALLISTE VITRIOLINA.

THE NEW-GRENADIAN RUFOUS-HEADED TANAGER.

PLATE XVIII.

Callispiza vitriolina.... *Cab.* Mus. Hein. p. 28.

Calliste ruficapilla .... *Sclater*, Contr. Orn. 1851, p. 61; P. Z. S. 1855, p. 158; List of Bogota B. p. 30; P. Z. S. 1856, p. 252.

Mas adultus. Ex griseo nitenti-viridescens: pileo rufo: capitis lateribus nigris: alis caudâque nigris cærulescenti-viridi limbatis: subtùs dilutior et cæruleo tinctus; ventre albescentiore, crisso pallidè rufescente: rostri nigri mandibulâ inferiore plumbeâ: pedibus nigricantibus: long. totâ 5·3, alæ 3·0, caudæ 2·2 poll. Angl.

Fœmina. Mari similis sed coloribus dilutioribus et marginibus alarum viridescentibus.

When I first became acquainted with this Tanager some years ago, I considered it to be the true *Tanagra cayana* of Linnæus. And indeed the figures and descriptions of that bird given by the older authors are quite as applicable to the present species as to the true *cayana*. But the fact, of which I was then ignorant, of the next following bird being quite common in Cayenne, while the present is confined to the interior of New Grenada,—a country, of which the natural productions have only of late years become familiar to Europeans,—is quite sufficient, were there no other grounds to go upon, to convince us that that species is the true "*Rufous-headed Tanager*" of the older authors, and this its distinct although closely-allied representative in the different zoological region of the New-Grenadian Andes.

Accordingly in my Synopsis of the genus *Calliste*, published in the beginning of the year 1851, I gave the specific title *ruficapilla* to this Tanager. Dr. Cabanis, in his catalogue of Heine's collection called "Museum Heineanum," has conferred the designation *vitriolina* on this same bird. And, since the sheets of that work containing

the Tanagers were, as I am informed, issued in the latter part of the year 1850, I think Dr. Cabanis' name is more properly applicable to this species, and ought to take precedence over my own.

This bird is common in Bogota collections, and is doubtless of frequent occurrence in the mountain-valleys of New Grenada, where those collections are formed. I have never seen it from any other locality.

The New-Grenadian Rufous-headed Tanager may be distinguished from *Calliste cayana* by the greenish colouring of the back and under-plumage. It is also of slightly larger dimensions, and has a well-defined red cap, while in *C. cayana* this colour passes gradually into the yellow of the nape.

Oudart dd.

Lith. Buquet frères.

Calliste cayana.

CALLISTE CAYANA.

THE LESSER RUFOUS-HEADED TANAGER.

PLATE XIX.

Tangara cayanensis viridis, *Briss.* Orn. iii. p. 21.

Moineau à tête rousse de Cayenne, *Buff.* Pl. Enl. 201. fig. 1 (fig. pess.).

Tangara à tête rousse de Cayenne, *Buff.* Pl. Enl. 290. fig. 1.

Le Passevert ..... *Buff.* H. N. iv. 273.
Desm. H. N. de Tang. pl. 10 & 11.

Tanagra cayana ..... *Linn.* S. N. i. p. 315.
Gm. S. N. i. p. 892.
Lath. Ind. Orn. i. p. 427.
Vieill. Enc. Méth. p. 777.

Fringilla autumnalis .. *Linn.* S. N. i. p. 320?

Calliste cayana ..... *Gray*, Gen. p. 366. sp. 7.
Bp. Consp. p. 234. sp. 1; Rev. et Mag. de Zool. 1851, p. 340; Note s. l. Tang. p. 14.
Sclater, P. Z. S. 1856, p. 252.

Calospiza cayana .... *Schomb.* Reise, iii. p. 670.

Callispiza cayana .... *Cab.* Mus. Hein. p. 27.

Calliste chrysonota.... *Sclater*, Contr. Orn. 1850, p. 50. pl. 51, et 1851, p. 62.

Rufous-headed Tanager, *Lath.* G. H. vi. p. 30.

Mas adultus. Flavescenti-ochraceus, pileo cuprescenti-rufo: capitis lateribus nigris: alis nigris cærulescenti-viridi limbatis: gutture nigricanti-cæruleo perfuso: rostro pedibusque nigris: long. totâ 4·8, alæ 2·7, caudæ 1·5 poll. Angl.

Fœmina. Coloribus obscurioribus et virescente mixtis: marginibus alarum viridescentibus.

As I have already stated in my account of the previous species, I formerly considered that to be the true *Tanagra cayana* of the older authors, and accordingly fell into the error of considering the present bird as undescribed, and applied to it the new appellation *chrysonota*. But I was afterwards fully convinced of my mistake.

This Tanager appears to be very common in British and French Guiana. In the latter country Buffon says that they live in the

open spots and in the vicinity of dwellings, and feed on the bananas and other fruits. He also accuses them of doing much harm in the rice-fields. Schomburgk tells us that this is one of the commonest birds all over British Guiana, and, as is the case with *Calliste flaviventris*, particularly affects the Trumpet-tree (*Cecropia peltata*), which blossoms the whole year through. The Macusis call it '*Schumai*.'

There are examples of this bird to be found in most Museums that have collections of any extent. The skins of it that have come under my examination are mostly from Cayenne, and are recognizable at once by their peculiar preparation. I have, however, one example from Trinidad, and have seen others. These are slightly larger in their dimensions than the Cayenne bird, but do not otherwise differ.

M. Levraud's collection from Caraccas, which I have already alluded to, contained examples of a Tanager, which I believe to have been of this species, but I have had no opportunity of making an accurate examination of it.

A young bird of this species in my possession has all the colours much more obscure and mixed with greenish, and hardly shows any traces of the rufous head.

CALLISTE CYANOLÆMA.

THE GREATER RUFOUS-HEADED TANAGER.

Calliste cyanolaima .... *Bp.* Rev. et Mag. de Zool. 1851, p. 140; Note s. l. Tang. p. 14.

Calliste cyanolæma .... *Sclater*, Tan. Cat. Sp. p. 12. sp. 21; P. Z. S. 1856, p. 252.

Mas adultus. Nitentissimè flavescenti-ochraceus: pileo cuprescenti-rufo: capitis lateribus nigris: alis caudâque nigris viridescenti-cæruleo limbatis: gutture toto nigricantiore et cyaneo relucente: rostro et pedibus nigris: long. totâ 5·5, alæ 2·8, caudæ 2·1 poll. Angl.

Fœmina. Obscurior; marginibus alarum et caudæ viridescentibus.

This Tanager bears so great a resemblance to the previous species, that I have not thought it necessary to give a separate figure of it; and indeed I have some doubts of the validity of its claim to specific distinction from *Calliste cayana*. The most apparent differences are its slightly larger dimensions and greater brilliancy of colouring, particularly in the amount of grey-blue upon the throat, which has led Prince Bonaparte to apply to it the term *cyanolaima*. This word I have altered, in accordance with the rules given in the Report adopted by the British Association on the subject of Zoological Nomenclature, into *cyanolæma*. My collection contains several examples of this bird, received from M. Parzudaki of Paris, who likewise, I believe, supplied the specimens whence Prince Bonaparte's original description was taken. They are all labelled "*Rio Negro*;" but I do not know upon what part of the territory called by that name they were collected, nor have I met with specimens elsewhere.

Lith. Lemercier Paris

Calliste cucullata

CALLISTE CUCULLATA.

THE CHESTNUT-CAPPED TANAGER.

PLATE XX.

Aglaia cucullata ..... *Swains.* Orn. Dr. pl. 7.

Calliste cucullata ..... *Gray,* Gen. p. 366. sp. 9.
Bp. Consp. p. 234; Rev. et Mag. de Zool. 1851, p. 140; Note s. l. Tang. p. 14.
Sclater, Contr. Orn. 1851, p. 63; P. Z. S. 1856, p. 253.
Burmeister, Syst. Ueb. d. Th. Bras. pt. iii. p. 183.

Mas adultus. Suprà flavescenti-ochraceus viridescente mixtus: pileo nigricante cinnamomeo-brunneo: infrà rufescente tinctus, pectore cærulescente: alis caudâque nigris viridi limbatis: crisso rufescenti-brunneo: rostro validiusculo plumbeo; pedibus nigricantibus: long. totâ 5·0, alæ 2·9, caudæ 1·7 poll. Angl.

Fœmina. Mari similis sed coloribus obscurioribus et viridescentioribus.

While many travellers and naturalists have visited the Amazon of late years and penetrated far up into the interior provinces of Peru and Ecuador, no one, as far as I am aware, since the times of Humboldt and Bonpland, has attempted to explore the Orinoco. And yet this mighty stream, with its mouths just opposite to the flourishing British island of Trinidad, would appear to form a highway singularly convenient for any one who wished to find ready access to one of the most interesting parts of the interior of the South American continent. For the natural history of the region adjacent to this great river is by no means well explored, and there are doubtless many discoveries to be made among the plants and animals of this interesting district. The present rare species of Tanager, first figured by Swainson as a bird of Brazil, is, I have good reason to believe, an inhabitant of this country, the examples in the Paris and Leyden Museums being marked "Santo Thomas," the old name for

Angostura, which town is situated on the Orinoco some 300 miles from its outlet. Besides the last-mentioned specimens, and one contained in the late Mr. Strickland's collection, I have scarcely if ever met with examples.

The Chestnut-capped Tanager may be distinguished from the allied species by the peculiar dark cinnamomeous colouring of the head.

Professor Burmeister, misled by the locality "S. Thomas" affixed to this bird in my "Tanagrarum Catalogus Specificus," has stated in his 'Systematische Uebersicht der Thiere Brasiliens' that I have given the West India Islands as the true habitat for this bird—a region, as far as my present information goes, quite outside of the generic area of the genus *Calliste*. He is also in error, I believe, in saying that Swainson met with this Tanager near Pernambuco in Brazil.

1. Cailiste flava mas. 2. idem fœmina.

CALLISTE FLAVA.

THE YELLOW TANAGER.

PLATE XXI. Fig. 1 ♂, 2 ♀.

Tangara Brasiliensis flava, *Briss.* Orn. iii. p. 39.

Tanagra flava ..... *Gm.* S. N. i. p. 896.
Lath. Ind. Orn. i. p. 431.
Max. Beitr. iii. p. 467.

Lindo bello ..... *Azara*, Pax. i. p. 387.

Tanagra formosa ..... *Vieill.* N. D. d'H. N. xxxii. p. 407; Enc. Méth. p. 773.

Tanagra chloroptera..... *Vieill.* N. D. d'H. N. xxxii. p. 407.

Aglaia flava ..... *Swains.* Zool. Ill. n. s. pl. 31.

Calliste flava..... *Gray*, Gen. p. 366. sp. 15.
Bp. Consp. p. 234; Rev. et Mag. de Zool. 1851, p. 140; Note s. l. Tang. p. 14.
Sclater, Contr. Orn. 1851, p. 61; Tan. Cat. Sp. p. 11; P. Z. S. 1856, p. 253.
Burm. Syst. Ueb. d. Th. Bras. iii. p. 181.

Callispiza flava..... *Cab.* Mus. Hein. p. 27.

Yellow Tanager ..... *Lath.* G. H. p. 22.

Mas adultus. Clarè ochraceo-flavus: alis caudâque nigris viridi limbatis; corpore subtùs a mento ad ventrem medialiter nigro: rostro pedibusque nigris: long. totâ 5·8, alæ 2·9, caudæ 2·0 poll. Angl.

Fœmina et avis junior. Ochraceo-flava, suprà viridi mixta: alis caudâque nigris viridi limbatis: subtùs medialiter albidior, ventris lateribus et crisso ochracescentibus.

Prince Maximilian of Neuwied, who gives excellent descriptions of both sexes of this Tanager in his 'Beiträge zur Naturgeschichte von Brasilien,' first met with it on the river Mucuri in the province of Porto Seguro. There, he says, it was not uncommon in the sandy bush bordering the sea-shore, and he also noticed its occurrence in many other places. Like most of the other Tanagers it has no song, but only a short call-cry.

Azara inserts it in his "Apuntamientos" under the name of "*Lindo bello*," but never met with it himself alive in Paraguay, the specimen described having been purchased dead.

Professor Burmeister, our most recent authority on the birds of Brazil, mentions its occurrence near New Freiburg.

Swainson obtained specimens of this Tanager in the vicinity of Pernambuco, where, he says, it is not uncommon, frequenting the gardens and feeding on the smaller-sized fruits, and it is abundant in collections of skins imported from Rio and Bahia. It probably extends all through eastern Brazil, though I do not believe it reaches so far north as the Amazon, which seems to be the line of separation between many of the Brazilian and Guiana species.

Oudart del. Lith. Becquet frères.

Calliste pretiosa.

CALLISTE PRETIOSA.

THE CHESTNUT-BACKED TANAGER.

PLATE XXII.

Lindo precioso ..... *Azar.* Pax. Par. i. p. 381 (?).

Aglaia cayana ..... *Lafr.* et *d'Orb.* Syn. Av. in Mag. de Zool. 1837, p. 32.

Tanagra cayana ..... *d'Orb.* Voy. p. 272.

Calliste cayana ..... *Hartl.* Ind. Azar. p. 6 (?).

Tanagra gyrola, *mas* .. *Max.* Beitr. iii. p. 471.
Dubois, Orn. Gal. pl. 87 (♂).

Callispiza preciosa .... *Cab.* Mus. Hein. p. 27.

Calliste castanonota.... *Sclater*, Contr. Orn. 1851, p. 63; Tan. Cat. Sp. p. 12.

Calliste pretiosa ..... *Bp.* Rev. et Mag. de Zool. 1851, p. 159; Note s. l. Tang. p. 14.
Sclater, P. Z. S. 1856, p. 254.

Calliste preciosa ..... *Burm.* Syst. Ueb. d. Th. Bras. iii. pt. ii. p. 182.

Mas adultus. Capite toto cum cervice posticâ et dorso medio cuprescenti-rufis: loris nigris: tectricibus alarum et dorso postico nitenti-flavescenti-ochraceis: remigibus rectricibusque nigris, cæruleo limbatis: subtùs viridescens: abdomine medio cærulescente: ventre imo crisso et tibiis pallidè rufis: rostro et pedibus fusco-nigris: long. totâ 6·3, alæ 3·3, caudæ 2·3 poll. Angl.

Fœmina. Viridescens, plumarum marginibus obscurioribus: alis caudâque nigris viridi limbatis: pileo et cervice cuprescenti-rufo perfusis: subtùs dilutior, crisso rufescente.

Whether this Tanager is really the "*Lindo precioso*" of Azara, is not, I think, quite certain. I cannot reconcile it very satisfactorily with his description. It would appear, however, to be the bird called "*Tanagra cayana*" by d'Orbigny, and identified by him with Azara's species, as far as we can judge by the characters given in the 'Voyage dans l'Amérique Méridionale.' The author there says that he met with this bird in the month of July in the gardens of the city of Corrientes on the orange-trees.

Prince Maximilian of Wied includes this *Calliste* among the birds

met with by him in the south-eastern provinces of Brazil, and gives a description of the male bird in his usual excellent style, which leaves no doubt as to the species intended, although he unfortunately confounds it with the *Calliste gyrola*. He mentions its occurrence in particular in the province of Rio Grande do Sul, from which locality likewise specimens were transmitted to England by Mr. Plant. The female described by the Prince is the male of the following species, which may be at once distinguished from the present by its black back.

Dr. Cabanis gave the name *preciosa* to this bird in his catalogue of Herr Heine's collection, and clearly pointed out its distinctive characters. About the same time I designated it as new under the specific title *castanonota*, but I believe Dr. Cabanis' name was proposed rather before my own, and is entitled to precedence.

I have observed examples of this Tanager in the Derby Museum at Liverpool, Herr Heine's collection at Halberstadt, and in the Museums of Vienna, Berlin and Brussels.

Oudart del. Lith. Geny Gros Paris

1 Calliste melanonota *mas* —— 2 *fœmina*.

CALLISTE MELANONOTA.

THE BLACK-BACKED TANAGER.

PLATE XXIII. Fig. 1 ♂, 2 ♀.

Tanagra peruviana .... *Desm.* Tan. pl. 11.
Vieill. Enc. Méth. p. 778.

Tanagra gyrola, fœm... *Max.* Beitr. iii. p. 417.
Dubois, Orn. Gal. pl. 87 (♂).

Aglaia melanota ..... *Swains.* Orn. Dr. pl. 31 (♂), 43 (♀).

Calliste peruviana .... *Gray*, Gen. p. 366. sp. 8.
Bp. Consp. p. 234; Rev. et Mag. de Zool. 1851, p. 140; Note s. l. Tang. p. 14.
Sclater, Contr. Orn. 1851, p. 64; Tan. Cat. Sp. p. 12.

Calliste melanota..... *Burm.* Syst. Ueb. iii. pt. ii. p. 182.

Calliste melanonota.... *Sclater*, P. Z. S. 1856, p. 254.

Mas adultus. Capite toto et cervice posticâ saturatè cupreo-rufis: dorso postico et tectricibus alarum nitenti-flavescenti-ochraceis: interscapulio nigerrimo: loris nigris: remigibus rectricibusque nigris cærulescente limbatis: subtùs clarè viridis, ventre medio cærulescente, imo cum crisso et tibiis pallidè rufis: rostro et pedibus fusco-nigris: long. totâ 5·8, alæ 3·0, caudæ 2·0 poll. Angl.

Fœmina. Suprà viridis, interscapulio obscuriore: pileo et cervice posticâ cuprescentibus: loris nigris: subtùs viridescens: ventre medio flavescenti-albido, imo cum crisso paululùm rufescente.

In the year 1805, Desmarest published his work entitled 'Histoire Naturelle des Tangaras, des Manakins et des Todiers,' containing an account of all the birds of those families which were then known to science. Twenty-seven species of Tanagers and seven of Manakins were treated of by this author. It may serve to give some idea of the advances which have been made during the last half century towards a knowledge of species in Zoology, to remark that there are now not less than 270 *Tanagrinæ* and more than 50 *Piprinæ* enrolled in our catalogues; and it is probable that further

additions will be made to both groups, as the great continent of South America becomes more fully explored.

To Desmarest, however, belongs the credit of first making known the present species of *Calliste*, and of giving a sufficiently accurate figure of the black-backed male bird, which he has done in the eleventh plate of his volume. He there states that it was brought by Dombey from Peru, and applies to it the epithet *peruviana*. Now whether ideas about geography were somewhat unsettled in those days, or whether Dombey was not accurate in recording his localities, I do not know, but certain it is that this Tanager does not come from Peru, but from the southern portion of Eastern Brazil—a very different zoological province, and one which, as far as I am aware, is not tenanted by a single species of *Calliste* which likewise occurs in Peru. I have therefore thought it necessary to reject Desmarest's appellation for this bird, and to use for it the name employed by Swainson, who gives excellent figures of both sexes in his 'Ornithological Drawings.'

Prince Maximilian of Neuwied has likewise, as I have had already occasion to remark, fallen into some error as regards this species. He describes it as the female of the preceding, *Calliste pretiosa*, and applies to them both Linnæus' name *gyrola*. Du Bois follows Prince Maximilian in his nomenclature, and in the 'Ornithologische Galerie' represents the male of this bird as the female of *Tanagra gyrola*. The males of these two allied species are very easily distinguishable, the present having a glossy black back, while in the former bird this part is chestnut-red like the head. But in the females the differences are not so obvious, for their plumages very closely resemble each other, though in the present bird there is rather more rufous colouring on the head and neck, and a slightly darker shade on the back.

Pudant del.

Lith. Bugnet frères

Calliste cyanoptera.

CALLISTE CYANOPTERA.

THE BLUE-WINGED TANAGER.

PLATE XXIV.

Aglaia cyanoptera .... *Sw.* Orn. Dr. pl. 8.

Tanagra argentea .... *Lafr.* Rev. Zool. 1843, p. 69.

Calliste cyanoptera.... *Gray*, Gen. p. 366. sp. 10.
Bp. Consp. p. 234; Rev. et Mag. de Zool. 1851, p. 140; Note s. l. Tang. p. 15.
Sclater, Contr. Orn. 1851, p. 64; Tan. Cat. Sp. p. 12; P. Z. S. 1856, p. 254.

Mas adultus. Argentescenti-ochraceus, viridi micans : capite undique cum gutture alis et caudâ nigris : harum marginibus angustis clarè cæruleis : rostro et pedibus nigris : long. totâ 5·5, alæ 3·0, caudæ 2·0 poll. Angl.

Fœmina aut avis junior. Viridescens : uropygio et ventre flavescentioribus, capite obscuriore, gutture albidiore: alis caudâque nigris viridi limbatis.

Mr. Swainson's beautiful 'Ornithological Drawings,' sometimes cited as his 'Birds of Brazil,' first made us acquainted with this Tanager, which is certainly one of the most finely coloured birds of the whole group. It is not, however, I believe, an inhabitant of any part of the large Brazilian Empire, but of the Republic of Venezuela. All the specimens of it which have come under my notice have been received from Caraccas ; that is to say, such has been the case in every instance in which I have been able to trace the locality. M. Levraud's collection from Caraccas, transmitted to the Jardin des Plantes at Paris, of which I have already made mention, contained examples of it, and, if I mistake not, Mr. Dyson also procured specimens in the same neighbourhood.

The Baron de Lafresnaye described this Tanager under the name of *T. argentea* in the 'Revue Zoologique' for 1843, along with other species from Bogota, but I have never noticed its occurrence in collections from New Grenada.

I am not quite sure whether the green-coloured bird described above is to be considered as the female or immature bird of this species. In nearly all the members of this group the females pretty closely resemble the male, except in brilliancy of colouring, and it is surprising to find such a difference as is above indicated. Otherwise, judging merely from the appearance of the feathers, I should be rather inclined to regard the green-coloured bird as the female.

The Blue-winged Tanager is not very similar to other birds of this genus, or likely to be confounded with any of them. A pretty species of *Dacnis*, however,—*Dacnis pulcherrima*,—which I first described in the 'Revue et Magasin de Zoologie' for 1853, rather remarkably resembles it in general colouring. But these birds belong to two quite different, although, in my opinion, nearly-allied families. Such instances of the recurrence of similar plumage in different groups are not very uncommon. The African Anthines of the genus *Macronyx* are clothed in nearly the same dress as the American *Sturnellæ*, and that singular Mexican bird *Ptilogonys nitens* (see Cassin's 'Illustrations of the Birds of California') so closely resembles some of the South American *Fluvicolinæ*, that it is really difficult to distinguish it from them at first sight.

Dudart del

Imp Gerv-Graf Paris

Calliste gyrola

CALLISTE GYROLA.

BUFFON'S GREEN TANAGER.

PLATE XXV.

Tangara peruviana viridis, *Briss.* Orn. iii. p. 23.

Tangara du Perou .... *Buff.* Pl. Enl. 133. fig. 2.

Le Rouverdin ..... *Buff.* H. N. iv. 286.

Tangara rouverdin, mâle, *Desm.* Tan. pl. 6.

Tanagra gyrola ..... *Linn.* S. N. i. p. 315.
Gm. S. N. i. p. 891.
Lath. Ind. Orn. i. p. 427.
Vieill. Enc. Méth. p. 778.

Aglaia chrysoptera .... *Swains.* An. in Men. p. 356.

Calliste gyrola..... *Gray*, Gen. p. 366. sp. 5.
Bp. Consp. p. 234.
Sclater, Contr. Orn. 1851, p. 67; Tan. Cat. Sp. p. 12; P. Z. S. 1856, p. 255.

Callospiza gyrola .... *Schomb.* Guian. iii. p. 670.

Callispiza gyrola..... *Cab.* Mus. Hein. p. 28.

Gyrola chrysoptera.... *Bp.* Rev. et Mag. de Zool. 1851, p. 139; Note s. l. Tang. p. 13.

Red-headed Greenfinch, *Edwards*, Glean. pl. 23.

Red-headed Tanager .. *Lath.* G. H. vi. 15.

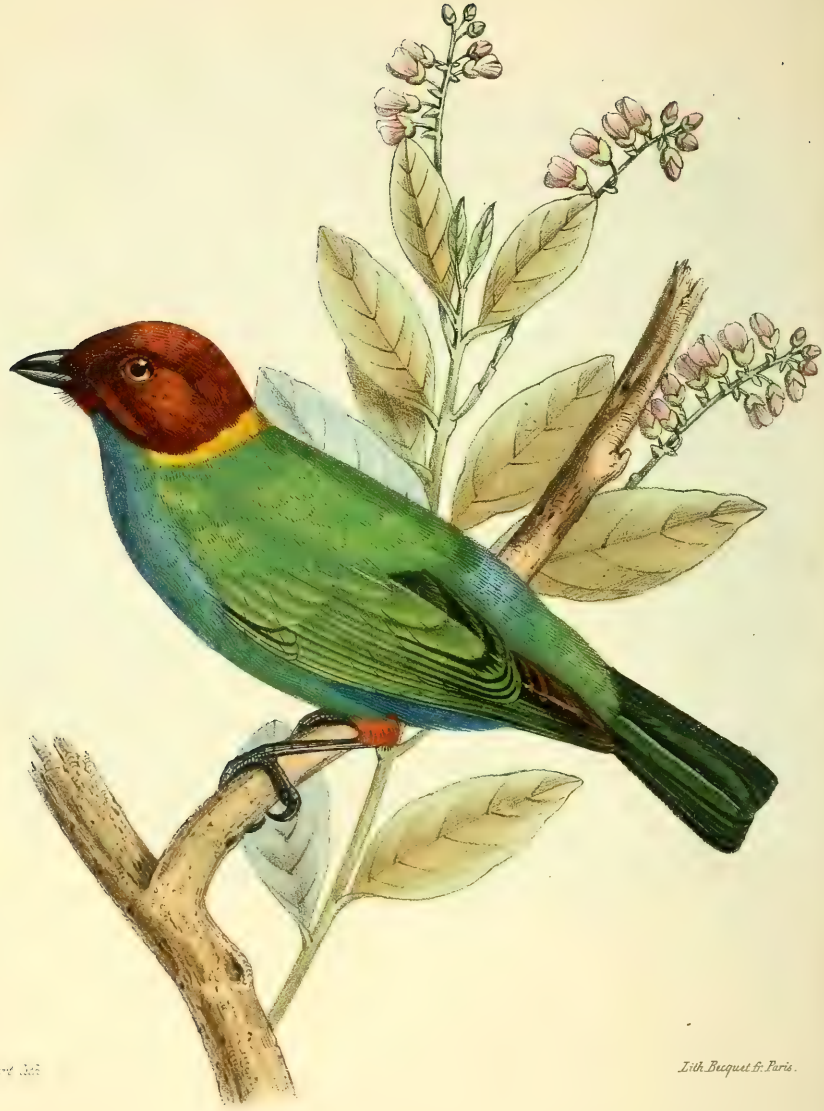
Mas adultus. Clarè viridis: capite et mento summo castaneis: campterio aurescente: abdomine medio cærulescente: tibiis pallidè rufis: rostro et pedibus fuscis: long. totâ 4·5, alæ 2·7, caudæ 1·8 poll. Angl.

Fœmina. Mari similis sed minùs splendens et ventre minùs cærulescente.

The older writers on Natural History were well acquainted with this Tanager, which is not uncommon in Cayenne and British Guiana. In the former region they tell us that it appears two or three times in the year and frequents certain trees, upon the fruit of which it feeds. Richard Schomburgk informs us in his 'Versuch einer Flora und Fauna von Britisch-Guiana,' that in that country it

is more common on the coast than in the interior, and is met with in the outskirts of the woods and plantations singly and in pairs.

Except from these localities I have never met with specimens of this bird. In Venezuela it is replaced by the *Calliste desmaresti*, and along the line of the Andes by the next following species. Mr. Swainson, having first figured the Venezuelan bird as the true *gyrola*, proposed in the second part of 'Animals in Menageries,' to call this *Calliste* by another name, but, as there is no doubt about this being the true *gyrola* of the older authors, I do not think we ought to consent to this, although to Mr. Swainson is due the credit of first pointing out the distinction between these three closely-allied species.



Calliste gyroloides.

CALLISTE GYROLOIDES.

THE BLUE-BACKED GREEN TANAGER.

PLATE XXVI.

Aglaia gyrola ..... *Lafr.* et *d'Orb.* Syn. Av. in Mag. de Zool. 1837, p. 32.

Tanagra gyrola ..... *d'Orb.* Voy. p. 272.

Aglaia peruviana..... *Swains.* An. in Men. p. 356.

Callospiza gyrola .... *Tsch.* in Wiegm. Arch. 1844, p. 286; Faun. Per. p. 202.

Calliste cyanoventris .. *Gray*, Gen. p. 366. sp. 19.

Aglaia gyroloides .... *Lafr.* Rev. Zool. 1847, p. 277.

Calliste gyroloides .... *Gray*, Gen. App. p. 17.
Bp. Consp. p. 234. sp. 5.
Sclater, Contr. Orn. 1851, p. 67; P. Z. S. 1854, p. 115; 1855, p. 158; et 1856, pp. 142 et 255.
Cassin, Rep. U. S. Astr. Exp. ii. p. 182. pl. 19. fig. 1.

Gyrola cyanoventris .. *Bp.* Rev. et Mag. de Zool. 1851, p. 139; Note s. l. Tang. p. 13.

Mas adultus. Clarè viridis: capite et mento summo castaneis: torque nuchali et campteriis aurescentibus: dorso postico et abdomine toto cæruleis: tibiis pallidè rufis: rostro et pedibus nigro-fuscis: long. totâ 5·0, alæ 2·9, caudæ 1·8 poll. Angl.

Fœmina. Mari similis sed minùs splendens et minùs cærulescens.

Neither Lafresnaye and d'Orbigny nor Tschudi in their several works upon the Zoology of Bolivia and Peru recognized the distinctness of this Tanager from the corresponding species of Cayenne and Guiana—the true *gyrola* of the older authors. Mr. Swainson was, however, as I have already stated, well acquainted with all the three species of this section, and conferred on the present bird the specific title *peruviana*. And this name would be properly employed for it, were not confusion thereby likely to be caused; another species (*Calliste melanonota*) having been previously called *peruviana* by Desmarest in 1808. Under these circumstances, therefore, we are

compelled to adopt for this bird the somewhat unpleasing appellation *gyroloides*, given to it by M. de Lafresnaye in the 'Revue Zoologique' for 1847, Mr. Gray's name *cyanoventris*, published a year in advance of the former, being likewise preoccupied.

In a group of which the species as a general rule have a limited range, this Tanager is remarkable for its diffusion over a very extended geographic area reaching from 10° N. Lat. to nearly 20° S. Lat. Beginning at the north, it was one of the two members of this genus met with by Mr. Bridges in the vicinity of David, in the province of Chiriqui, as recorded in the List of Mammals and Birds which he collected there, given in the Proceedings of the Zoological Society for 1856. It is of constant occurrence in Bogota collections. Next we find it in Cisandean Ecuador, on the head-waters of the Rio Napo, whence specimens have been transmitted by M. Villa-vicencio: see P. Z. S. 1854, p. 115. Von Tschudi includes it among the *Callistæ* of the wood-region of Eastern Peru, and d'Orbigny found it in the country of the Yuracares Indians, at the eastern foot of the Bolivian Andes. Here, he says, it is as common as the other species of the genus which occur there (*Callistæ boliviana, cyanicollis, schranki,* and *yeni*), and has the same habits, keeping in movement among the branches of the highest trees. Its native name is "*Chachindala.*"

Mr. Bridges' notes on this bird, as observed by him near David in Veragua, were, that it was found on the high trees near the town, and fed on the fruit of a small-fruited species of *Ficus*.

The adult male of the present *Calliste* is readily distinguishable from that of the preceding species by its blue rump. This is less visible in younger birds, and in some quite immature individuals in my collection even the red cap is scarcely apparent, and the whole plumage is of a nearly uniform dull green.

Sudart del. Lith. Becquet frères.

Calliste Desmaresti.

CALLISTE DESMARESTI.

DESMAREST'S GREEN TANAGER.

PLATE XXVII.

Tangara rouverdin, femelle, *Desm.* Tan. pl. 7 (?).

Tanagra gyrola ..... *Swains.* Zool. Ill. n. s. pl. 28.

Calliste desmaresti .... *Gray*, Gen. p. 366. sp. 6.
Sclater, Contr. Orn. 1851, p. 67; P. Z. S. 1856, p. 256.
Cassin, Rep. U. S. Astr. Exp. ii. p. 182. pl. 19. fig. 2.

Aglaia viridissima .... *Lafr.* Rev. Zool. 1847, p. 277.

Gyrola viridissima .... *Bp.* Rev. et Mag. de Zool. 1851, p. 139; Note s. l. Tang. p. 13.

Calliste viridissima .... *Bp.* Consp. p. 234.

Mas adultus. Clarè viridis: capite toto et mento summo castaneis: tibiis pallidè rufis: rostro nigro-fusco: pedibus nigricantibus: long. totâ 5·0, alæ 2·9, caudæ 1·8 poll. Angl.

Fœmina. Mari similis sed minùs splendens.

While the last preceding bird is the representative of the *Calliste gyrola* in the lengthened region lying to the eastward of the great Andean range, the present species seems to supply its place in that branch of the Andes which extends through the north of Venezuela, and terminates in the island of Trinidad. From the latter locality and from Caraccas many specimens of this *Calliste* have been sent to Europe. It is probably the bird given by Desmarest as the supposed female of the *gyrola*. It is certainly the species figured under that name by Mr. Swainson in the second series of his beautiful 'Zoological Illustrations,' and a very accurate representative of it has likewise been lately published in the 'Report of the United States Naval Astronomical Expedition to the Southern Hemisphere.'

As was the case with *Calliste gyroloides*, Mr. Gray and M. de Lafresnaye gave separate names to the present bird about the same

time. But in the present instance we are glad to be able to employ Mr. Gray's appellation; for it has both the claim of priority by a short period, and the merit of perpetuating the name of an author who wrote a Monograph of the beautiful family of birds to which the present genus belongs at an early date, and gave to the world an accurate account of all that was known about them at that time.

Desmarest's Tanager may be at once distinguished from its close allies, the two lastly represented species of this genus, by the want of any tinge of blue colouring on the rump or belly. The whole bird is of a nearly uniform bright green with the chin and cap chestnut-red, and the inner webs of the wing- and tail-feathers blackish.

Lith Gerry Frères Paris

Calliste brasiliensis.

CALLISTE BRASILIENSIS.

THE BRAZILIAN TURQUOISE TANAGER.

PLATE XXVIII.

Tangara brasiliensis cærulea, *Briss.* Orn. iii. p. 9.

Tangara bleu de Brésil, *Buff.* Pl. Enl. 179. fig. 1.

Tanagra brasiliensis .. *Linn.* S. N. i. p. 316.
Gm. S. N. i. p. 895.
Lath. Ind. Orn. i. p. 424.
Vieill. Enc. Méth. 780.
Max. Beitr. iii. p. 477.

Tangara barbadensis cærulea, *Briss.* Orn. iii. 8?

Tangara bleu de Cayenne, *Buff.* Pl. Enl. 155. fig. 1; H. N. iv. 282?

Tanagra mexicana, var. *β*, *Gm.* S. N. i. p. 893?

Tanagra barbadensis .. *Kuhl*, Ind. Pl. Enl. p. 3?
Temm. Ind. Pl. Col. p. 31?

Calliste albiventris .... *Gray*, Gen. p. 366. sp. 22?

Calliste brasiliensis.... *Gray*, Gen. p. 366. sp. 11.
Bp. Consp. p. 234.
Sclater, Contr. Orn. 1851, p. 68; P. Z. S. 1856, p. 256.
Burm. Syst. Ueb. d. Th. Bras. iii. pt. ii. p. 180.

Callospiza barbadensis, *Bp.* Compt. Rend. Ac. Sc. Par. xxxii. p. 80.

Callospiza brasiliensis.. *Bp.* R. Z. 1851, p. 468; Note s. l. Tang. p. 19.
Cab. Mus. Hein. p. 27.

Turquoise Tanager.... *Lath.* G. H. vi. p. 29.

Mas adultus. Niger: capite antico et laterali cum gutture, pectore et lateribus necnon dorso postico et alarum tectricibus remigumque marginibus externis cæruleis: rostri ambitu, torque gutturali interrupto et maculis in lateribus pectoris et ventris nigris: abdomine medio et tectricibus subalaribus albis: rostro et pedibus nigris: long. totâ 6·0, alæ 3·3, caudæ 2·2 poll. Angl.

Fœmina. A mari vix diversa, sed coloribus paulò dilutioribus.

The Turquoise Tanager is one of the commonest birds in the collections which are now-a-days so frequently imported from the ports

on the eastern coast of Brazil, and is well known to every student of exotic ornithology.

Prince Maximilian of Neuwied informs us that he met with it in numbers in several provinces of Eastern Brazil, but less often in the forests than the more open country which was varied with wood, and particularly at the edges of the plantations. Here it goes commonly in pairs, perching generally upon the top of shrubs, and feeding on fruits. In the month of November the Prince found a nest of this Tanager placed in a thick bush in a fork formed by the separation of four branches, and built after the fashion of that of our Chaffinch (*Fringilla cœlebs*). It was constructed very neatly of wool, nearly all white, only varied with a few rootlets and moss and bark interwoven, and lined within with broad threads of bark. The two eggs which it contained were rather long in shape, marbled with pale reddish violet upon a white ground, and varied with a few irregular black specks and blotches.

Prof. Burmeister notices the occurrence of this bird in the vicinity of New Freiburg.

I am not quite sure whether Buffon's 'Tangara bleu de Cayenne' and its attendant synonyms are more correctly applicable to this species or to *Calliste flaviventris*, but the balance of authorities on this point seems to be in favour of the present bird.

I have a young individual of this *Calliste*, evidently of the first year. It is coloured very much like the parent birds, except that the black is much less intense, and the blue colouring on the breast and wing-coverts has as yet only partially appeared, and these parts have more white about them.

Goujart del. Imp: Geny-Gros P

Calliste flaviventris

CALLISTE FLAVIVENTRIS.

THE GUIANAN TURQUOISE TANAGER.

PLATE XXIX.

Tangara cayennensis cærulea, *Briss.* Orn. iii. p. 6.

Tangara tacheté de Cayenne, *Buff.* Pl. Enl. 290. fig. 2.

Tangara diable-enrhumé, *Buff.* H. N. iv. 27.
Desm. H. N. d. Tang. pl. 5.

Tanagra mexicana .... *Linn.* S. N. i. p. 315.
Gm. S. N. i. p. 893.
Lath. Ind. Orn. i. p. 426.

Tanagra flaviventris .. *Vieill.* N. D. d'H. N. xxxii. p. 411; Enc. Méth. p. 774.

Calliste mexicana .... *Gray*, Gen. p. 366. sp. 21.
Bp. Consp. p. 235.

Callospiza mexicana .. *Schomb.* Guian. iii. p. 670.

Calliste flaviventris.... *Sclater*, Contr. Orn. 1851, p. 69; P. Z. S. 1856, p. 257.

Callispiza flaviventris .. *Cab.* Mus. Hein. p. 27.

Callospiza cayennensis, *Bp.* Compt. Rend. xxxii. p. 80; Rev. et Mag. de Zool. 1851, p. 169; Note s. l. Tang. p. 20.

Black and Blue Tanager, *Edwards*, Glean. pl. 350.
Lath. G. H. vi. p. 35.

Mas adultus. Niger: capite antico et laterali cum gutture, pectore et lateribus necnon dorso postico et tectricum alarium majorum marginibus externis cæruleis: rostri ambitu, torque gutturali interrupto et maculis in lateribus pectoris et ventris nigris: tectricibus alarum minoribus turcoso-cæruleis: remigum externarum margine angustâ cyaneâ: abdomine medio cum crisso et tectricibus subalaribus albis, sulphureo-flavo tinctis: rostro et pedibus nigris: long. totâ 5·4, alæ 2·7, caudæ 1·8 poll. Angl.

Fœmina. Mari similis sed minùs splendens.

The upper portion of South America lying under the equator is the true home of the Tanagers of the genus *Calliste*. Northwards of the Isthmus of Panama but few occur, and in Mexico a single one

only, and that in Tabasco, one of the most southern states of the confederacy. M. Sallé's large collection, formed a few degrees to the north of this, did not contain a single individual of the genus. Such being the case, it would be obviously wrong to continue to employ for this species (which is not the Mexican one) the appellation *mexicana,* and I therefore follow several recent authorities in using for it the second-given name *flaviventris.* Although Linnæus called it *mexicana* (apparently confounding it with some bird called by Hernandez by the ineuphonious name Touauhtolotl!), Buffon and Brisson were well aware that it is really an inhabitant of Cayenne and Guiana, where the Creoles are said to have bestowed upon it the peculiar appellation of "*Le diable enrhumé,*" but for what reason we are not informed. Schomburgk says it is one of the commonest birds in British Guiana, and resorts particularly to the *Cecropia* trees, like *Calliste cayana.* The Warraus call it *Mohebera.* It seems to extend pretty far into the interior, for Mr. Wallace transmitted specimens to Europe from the Upper Rio Negro.

The Turquoise Tanager of Cayenne is distinguishable at once from that of Brazil by its inferior size and by the yellowish tinge on the belly. To the next following bird, *Calliste vieilloti,* as hereafter shown, it is certainly very closely allied, and many Ornithologists would be inclined to consider these two birds merely as local races of the same species.

CALLISTE VIEILLOTI.

VIEILLOT'S TURQUOISE TANAGER.

Tanagra flaviventris .. *Vieill.* Enc. Méth. p. 774 (partim).

Callospiza mexicana .. *Bp.* Compt. Rend. Ac. Sc. Par. xxxii. p. 80; Rev. et Mag. de Zool. 1851, p. 169; Note s. l. Tang. p. 20.

Calliste vieilloti ..... *Sclater*, P. Z. S. 1856, p. 257; Syn. Av. Tan. p. 83.

Mas adultus. Niger, capite antico et laterali cum gutture, pectore et lateribus necnon dorso postico et tectricum alarium majorum marginibus externis cæruleis: rostri ambitu, torque gutturali interrupto et maculis in lateribus pectoris et ventris nigris: tectricibus alarum minoribus turcoso-cæruleis: remigum externarum margine angustâ cyaneâ: abdomine medio cum crisso et tectricibus subalaribus flavis: rostro et pedibus nigerrimis: long. totâ 5·4, alæ 2·7, caudæ 1·8 poll. Angl.

Fœmina. A mari vix diversa.

There can be no question of the fact, however strongly we may uphold the doctrine of the unity of individual species, that, when an animal is extended over a large geographical area, there may be detected, as a general rule, certain differences, smaller or greater, as the case may be, between examples coming from two different localities. It is hard to say positively in many of these cases, where local variation terminates and specific difference begins. Some Naturalists are inclined to go very far in one direction, and to look upon many apparently well-established species as merely local varieties; others uphold the contrary view, and consider the slightest variation in examples from different localities as sufficient for the foundation of new species. In these matters, as in many others, *aurea mediocritas* is the best rule. For myself, however, whilst I am always reluctant to create new specific titles for animals which can be fairly considered as varieties of established species, I am ever desirous to adopt species where they have been made by other writers, if there

seem to be fair and reasonable grounds for so doing. In the present instance I must admit I am stretching my *complaisance* to nearly its limits. There is certainly but a barely sufficient amount of difference between this bird and the latter to warrant our considering them as distinct. But as the present Tanager has been considered a valid species by Prince Bonaparte, I have thought it best to retain it so, though I cannot employ for it the old specific title *mexicana*, as he has proposed; for, in the first place, the bird has nothing to do with Mexico, and secondly, if the name *mexicana* were employed at all, it should be used for the Cayenne bird, Linnæus's *T. mexicana* having been founded principally on Brisson's "*Tangara cayennensis cærulea*."

I have therefore called it after Vieillot's name, that indefatigable writer having remarked upon its existence in the 'Encyclopédie Méthodique' as long ago as 1820, though he did not confer on it a distinct specific appellation.

Vieillot's Turquoise Tanager is common in collections from Trinidad, and may be recognized by its bright yellow belly and under wing-coverts, which in *C. flaviventris* are creamy white tinged with yellow. I have not noticed its occurrence from other localities.

Imp. Lemercier Paris

Calliste bolivana

SMITHSONIAN INSTITUTION.
UNITED STATES NATIONAL MUSEUM.

Red & cyan blue
Orange & ultramarine
Yellow & violet
Green & magenta

CALLISTE BOLIVIANA.

THE BOLIVIAN TURQUOISE TANAGER.

PLATE XXX.

Aglaia mexicana..... *Lafr.* et *d'Orb.* Syn. Av. in Mag. de Zool. 1837, p. 32.

Tanagra flaviventris .. *d'Orb.* Voy. p. 270.

Calospiza boliviana.... *Bp.* Compt. Rend. Ac. Sc. Par. xxxii. p. 80; Rev. et Mag. de Zool. 1851, p. 169; Note s. l. Tang. p. 20.

Calliste boliviana .... *Sclater,* Contr. Orn. 1851, p. 69; P. Z. S. 1855, p. 158; List of Bog. B. p. 30; P. Z. S. 1856, p. 258; Syn. Av. Tan. p. 84.

Mas adultus. Niger: capite antico et laterali cum gutture, pectore et lateribus necnon dorso postico et tectricibus alarum minoribus cum marginibus tectricum majorum cæruleis: rostri ambitu, torque gutturali interrupto, et maculis in lateribus pectoris et ventris nigris: remigum margine externâ angustè cyanescente: abdomine medio crissoque cum tectricibus subalaribus flavissimis: rostro pedibusque nigerrimis: long. totâ 5·0, alæ 2·75, caudæ 1·9 poll. Angl.

Fœmina. A mari vix diversa.

The Bolivian Turquoise Tanager represents its affines of Cayenne and Brazil, *Callistæ flaviventris* and *brasiliensis*, along the subandean districts of Bolivia, Peru, Ecuador and New Grenada, in the same way that *Calliste guttata* replaces *C. punctata*, and *C. gyroloides* *C. gyrola*, in these localities. The ornithology of Tropical America offers many similar interesting examples of the diffusion of corresponding ornithic species over different geographic areæ, which, when they are all fully worked out, will no doubt afford us great assistance in dividing out the Neotropical or great southern zoological kingdom of the New World into its constituent provinces.

This *Calliste* appears to have been first noticed by d'Orbigny, who found it in the territories of the Guarayos and Yurucares Indians in

Bolivia. He did not in his writings distinguish it from the true *flaviventris*, although the points of difference are noticed, but Prince Bonaparte founded the specific appellation *boliviana* on specimens collected by him, which are now in the Paris Museum. The name however is not particularly appropriate, as the bird ranges far to the northward of the Bolivian republic. It is found in all collections from Eastern Peru, and extends down the upper course of the Amazon as far as Ega, whence Mr. Wallace transmitted specimens. Examples are also contained in some of the more recently received collections from Bogota.

This species may be at once recognized from the two preceding, to both of which it offers a close general resemblance, by the want of the bright sea-green colour on the bend of the wing.

Oudart del

Imp Geny Gros Paris

Calliste atricœrulea

CALLISTE ATRICÆRULEA.

THE BLACK-AND-BLUE TANAGER.

PLATE XXXI.

Procnopis atro-cærulea..*Tschudi*, Consp. Av. in Wiegm. Arch. 1844, p. 285; Faun. Per. p. 199. pl. 13. fig. 2.

Calliste atrocærulea .. *Gray*, Gen. App. p. 17.
Sclater, Contr. Orn. 1851, p. 59; P. Z. S. 1856, p. 258; Syn. Av. Tan. p. 84.

Chalcothraupis atrocærulea, *Bp.* Rev. et Mag. de Zool. 1851, p. 144; Note s. l. Tang. p. 19.

Mas adultus. Clarè cæruleus, alis caudâque nigris cæruleo marginatis: interscapulio toto nigro: capite toto obscurè viridescenti-cæruleo, plagâ magnâ nuchali pallidè stramineâ: subtùs cæruleus, gulâ magìs thalassinâ, ocellis quibusdam in pectore nigris: rostro et pedibus nigris: long. totâ 5·0, alæ 3·0, caudæ 2·0 poll. Angl.

Several of the birds inhabiting the eastern wood-district of the republic of Peru, which were at one time considered identical with species well known to us as coming from the interior of New Grenada, have been since found on accurate comparison to be different, although very closely allied to the New-Grenadian forms. Thus the *Pipreola elegans* of Tschudi is truly distinct from the *P. aureipectus* of New Grenada; the *Iridornis analis* from the *I. porphyrocephala*; and the Dipper, discovered by Delattre in the mountains of the latter republic, and referred by De Lafresnaye to Tschudi's *Cinclus leucocephalus*, is certainly specifically, and possibly even generically separable from that bird. The tendency to unite the corresponding species of these countries has no doubt, however, been increased as well by the poverty of the figures and inadequacy of the descriptions in Von Tschudi's Fauna Peruana, as by the difficulty of obtaining specimens from this part of the world. No one who had seen an example of the present Tanager would be likely to confound it with the *Calliste ruficervix* (which, as I have already mentioned, has been done). The wholly

blue under-surface and the peculiar pale straw-coloured nuchal patch render this species easily distinguishable among its near allies, between which and the birds known as Turquoise Tanagers (*Calliste brasiliensis*, *flaviventris*, &c.), it seems to form a sort of connecting link as regards colouring.

The accompanying plate has been made from the only authentic example of this Tanager which I have ever met with—the type also of Tschudi's description—M. Coulon, the Director of the Collection of Natural History of the Gymnasium at Neuchâtel, where Von Tschudi's collections are deposited, having most liberally allowed me to convey it to Paris, for the purpose of submitting it to M. Oudart's pencil.

In Lord Derby's museum at Knowsley, I once saw a specimen from Bridges' Bolivian collection, which I imagined to be referable to the immature state of this Tanager, and in my "Synopsis Avium Tanagrinarum" accordingly noted that collection as containing an example of it. Mr. T. Moore, however, the Curator of the Derby Museum as now at Liverpool, informs me that he has been unable to find the specimen in the present state of the collection.

Vallée del. A. Lemercier Paris

CALLISTE RUFICERVIX.

THE RED-NAPED TANAGER.

PLATE XXXII.

Aglaia ruficervix..... *F. Prev.* Voy. Venus, Ois. pl. 5, fig. 1.

Arremon(!) rufivertex(!)*Gray*, Gen. p. 361, sp. 3.

Procnopis atro-cœrulea et Tan. ruficervix, *Bp.* Compt. Rend. Ac. Sc. Par. xxxii. p. 77.

Chalcothraupis ruficervix, *Bp.* Rev. et Mag. de Zool. 1851, p. 144; Note s. l. Tang. p. 18.

Calliste leucotis..... *Sclater*, Contr. Orn. 1851, p. 58.

Calliste ruficervix .... *Sclater*, Contr. Orn. 1851, p. 58; P. Z. S. 1855, p. 158; List of Bog. B. p. 158; P. Z. S. 1856, p. 259; Syn. Av. Tan. p. 85.

Mas adultus. Viridescenti-cærulescens: dorsi plumis medialitèr et intùs nigris: alis caudâque nigris viridescenti-cæruleo limbatis: pileo et cervice posticâ purpureis, vittâ latâ transnuchali aurescenti-rufâ: fronte, mento et loris nigris: ventre medio crissoque cum tibiis ochraceis: rostro et pedibus nigris: long. totâ 4·5, alæ 2·8, caudæ 1·7 poll. Angl.

Fœmina. Vix à mari diversa.

There have been some rather curious mistakes made about the nomenclature of this bird, such mistakes as, I regret to say, the writers on Natural History of the present day not unfrequently fall into, although they have not the excuses of the older authors, who could plead the newness of their subject—the extreme scarcity of specimens —and the general want of accurate pictorial representations of objects of Natural History. The red-naped Tanager was first made known by a figure of it given in the Natural-History-Atlas of the 'Voyage of the Venus,' which, although not so perfect as it might have been, is quite sufficiently accurate to render the species easily recognizable, and to show that it is in every way distinct from the brilliant bird commonly known as *Iridornis dubusia*. Yet M. de Lafresnaye, when he first described the latter species, referred it without hesitation to the bird figured in the 'Voyage of the Venus,' and moreover com-

mitted the additional error of transforming the name *ruficervix* there given into *rufivertex*. In this he has been followed by several authors, who did not choose to trouble themselves by referring to the original work. Prince Charles Bonaparte first pointed out these mistakes in his 'Note sur les Tangaras' in the 'Revue et Magasin de Zoologie' for 1851; and on account of the "*heureuse inadvertence*," as he calls it, by which the wrong name was quoted for the *Iridornis*, suggests the continuance to that bird of the specific term *rufivertex*, in which however he has not been followed by subsequent writers.

In the 'Comptes Rendus' for the same year, the Prince seems to consider this bird the same as *Procnopis atrocærulea* of Tschudi (the last species), which is not the case.

The *Calliste ruficervix* is common in collections from Bogota, and extends down the valleys of the Andean ranges as far as the vicinity of Quito, where M. Bourcier obtained specimens. Supposing, from Prince Bonaparte's description of these examples, that they belonged to a species different from that of the Bogota bird, I formerly founded upon them the name *Calliste leucotis*. In this I was in error, for on examination of M. Bourcier's type in the French National Collection, I found it to be the same as the New Grenadian species.

2
1

CALLISTE ATRICAPILLA.

THE BLACK-CAPPED TANAGER.

PLATE XXXIII. Fig. 1 ♂, 2 ♀.

Tan. (Aglaia) atricapilla, *Lafr.* R. Z. 1843, p. 290.

Calliste atricapilla .... *Bp.* Consp. p. 235.
Sclater, Contr. Orn. 1851, p. 59; P. Z. S. 1855, p. 158; List of Bog. B. p. 30; P. Z. S. 1856, p. 259; Syn. Av. Tan. p. 85.

Chalcothraupis atricapilla, *Bp.* Rev. et Mag. de Zool. 1851, p. 144; Note s. l. Tang. p. 19.

Procnias heinei ..... *Cab.* Mus. Hein. p. 31.
Bp. Rev. et Mag. de Zool. 1851, p. 134; Note s. l. Tang. p. 8.

Mas adultus. Argenteo-cærulescens, alis caudaque nigris, illo colore limbatis: pileo nigerrimo: gutturis et pectoris plumarum basibus nigris, apicibus autem acuminatis et colore clarè viridibus: rostro pedibusque nigris: long. totâ 4·8, alæ 2·8, caudæ 1·7 poll. Angl.

Fœmina. Viridis, pileo obscuro: gutture mari simili, sed pallidiore.

There is rather greater difference between the male and female of this species than is usually met with in the birds of this genus, but its form is otherwise typical; and, although I acknowledge that such facts ought to be of considerable weight in determining natural affinities, I do not think them sufficient for distinctive generic characters in the absence of structural variation. As a general rule certainly, species of the same natural genus correspond in the variations of sex and age, but exceptions are by no means infrequent. A familiar instance is that of our Song Thrush and Blackbird (*Turdus musicus* and *Turdus merula*). There is the greatest structural similarity between these two birds, and it appears to me quite unnatural to range them further apart than as, perhaps, the heads of two different sections of the genus *Turdus*; but, as everyone knows, there is no sort

of correspondence in the variations of plumage of the sexes of these two birds; the male and female being in the one case extremely alike, and in the other very different.

The black-capped *Calliste* was first described by the Baron F. de Lafresnaye in the 'Revue Zoologique' for 1843, as then lately received with other novelties from Bogota. It appears to extend its range throughout the mountain-valleys of New Grenada and into the neighbouring republic of Venezuela, specimens having been procured by the late Mr. Dyson in the vicinity of Caraccas. There are examples in the Derby Museum at Liverpool, collected, I believe by Delattre, near Popayan, which is its farthest range in a westerly direction which has come under my notice.

In the summer of 1854 I had the pleasure of inspecting the beautiful collection of birds belonging to Herr Oberammtman Ferdinand Heine of Halberstadt, which is so well known from the publication of Dr. Cabanis' catalogue of it under the title of "Museum Heineanum." I had no hesitation in deciding that *Procnias heinei*, of which I then examined the type, is an immature bird of this species.

Imp. Ceny-Gros

Calliste argentea

CALLISTE ARGENTEA.

THE SILVERY TANAGER.

PLATE XXXIV.

Procnopis argentea.... *Tsch.* Consp. Av. in Wiegm. Arch. 1844, p. 285; Faun. Per. p. 199. pl. 14. fig. 2.

Calliste argentea..... *Gray*, Gen. App. p. 14.
Bp. Consp. p. 235.
Sclater, Contr. Orn. 1851, p. 59; P. Z. S. 1856, p. 259; Syn. Av. Tan. p. 85.

Chalcothraupis argentea, *Bp.* Rev. et Mag. de Zool. 1851, p. 144; Note s. l. Tang. p. 19.

Mas adultus. Suprà grisescenti-argenteo-cyanescens, alis caudâque nigris illo colore (paulò obscuriore) marginatis: pileo toto cum nuchâ nigerrimis: subtùs niger, gutture toto et cervice laterali fulvescenti-aureo-brunneis: ventre imo et laterali cum crisso dorso concoloribus: rostro et pedibus nigris: long. totâ 5·4, alæ 3·0, caudæ 2·0 poll. Angl.

We are again indebted to Dr. J. J. von Tschudi for the discovery of this fine species of *Calliste*, which is found along with other members of the genus in the hot wood-region of Eastern Peru. Besides the type-specimen (from which the present figure has been taken, and for the loan of which I must again express my obligations to M. Coulon), I have seen but one other example of this bird. This example, however, which is in the Belgian National Collection, was obtained by exchange from Neuchâtel, and Tschudi therefore seems to be the only Naturalist who has met with this Tanager.

Although allied to Lafresnaye's *Calliste atricapilla*, which it resembles in the peculiar silvery-grey colouring of the back and black cap, the present bird may be readily distinguished by the brownish-golden throat and black breast, which render it easily recognizable among the other members of the genus.

Tschudi says that this Tanager, like other *Callistæ* observed by him, frequents the highest trees of the forest: he gives us no further information concerning its habits.

CALLISTE NIGRIVIRIDIS.

THE NEW GRENADIAN BLUE-AND-BLACK TANAGER.

Tanagra nigroviridis .. *Lafr.* R. Z. 1843, p. 69; Mag. de Zool. 1843, pl. 43.

Calliste nigroviridis .. *Gray*, Gen. p. 366. sp. 23.
Bp. Consp. p. 235.
Sclater, Contr. Orn. 1851, p. 56; P. Z. S. 1855, p. 158; List Bog. B. p. 30; P. Z. S. 1856, p. 260; Syn. Av. Tan. p. 86.

Callispiza nigroviridis.. *Cab.* Mus. Hein. p. 27.

T. (Aglaia) nigroviridis, *Less.* Descr. p. 348.

Chalcothraupis nigroviridis, *Bp.* Rev. et Mag. de Zool. 1851, p. 145; Note s. l. Tang. p. 19.

Mas adultus. Niger: pileo, cervice et dorso postico cum corpore toto subtùs argentescenti-viridi-cyaneis, plumis subtùs nigris, hoc colore terminatis: fronte, loris, regione oculari et mento nigris: abdomine medio albicante: remigibus rectricibusque nigris cyaneo marginatis: tectricibus alarum minoribus intensè cyaneis: majoribus autem argentescenti-cyaneo marginatis: rostro nigro, mandibulæ inferioris basi albidâ: pedibus fusco-nigris: long. totâ 5·0, alæ 2·9, caudæ 1·8 poll. Angl.

Fœmina. Vix à mari diversa.

This is amongst the most abundant species which are commonly brought to England in Bogota collections, and was accordingly noticed and named by the Baron F. de la Lafresnaye, in one of his earliest communications to the 'Revue Zoologique' upon the Ornithology of that country.

When I first saw a copy of Holton's 'New Grenada,' published at New York in the end of the year 1856, I turned eagerly over its pages, hoping that I should find some such information as I had long desired concerning the trade in birdskins from Bogota, and from what part of the country they were principally procured. But to my great disappointment I found not a word upon the subject, although the writer is Professor of Natural History in Middlebury College in the State of Vermont; and, as it appears, went out to New Grenada upon

scientific pursuits. Had there not been such an animal as a bird in the whole country, there could not have been less said about the matter. There is, however, a very good topographical index and map appended to this work, which have enabled me to find the situations of several places known as localities whence collections have been sent, but which I could never discover in ordinary Atlases. None of these spots appear to be very distant from Bogota itself, but are situated lower down in the valleys of the streams running into the Magdalena, or upon the upper confluents of the Orinoco, some of which take their rise at no remote distance from the New Grenadian capital.

The *Calliste nigriviridis* extends itself along the valleys of both the eastern and western slopes of the Andean range into the republic of Ecuador. On the Pacific side it was procured by M. Bourcier in the valley of Calacali, near Quito ; and specimens have also been transmitted to Sir William Jardine, by Professor Jameson, from the same country. These latter were procured on the western slope of the mountain Pichincha, where the bird was found feeding on the berries of various species of *Melastoma*. On the opposite side of the great range, this bird occurs on the upper Rio Napo, in the province of Quixos, whence specimens have been received by Mr. Gould.

I have given no figure of this Tanager, but Plate XXXV represents the next following closely allied species *Calliste cyanescens*, which very nearly resembles the present bird.

Imp. Lemercier Paris

Calliste cyaneseens.

CALLISTE CYANESCENS.

THE VENEZUELAN BLUE-AND-BLACK TANAGER.

PLATE XXXV.

Calliste cyanescens.... *Sclater*, P. Z. S. 1856, p. 41; Syn. Av. Tan. p. 86.

Mas adultus. Niger: pileo, cervice et dorso postico cum corpore subtus argentescenti-cyaneis: plumis subtus nigris argentescenti-cyaneo terminatis: fronte, loris, regione oculari et mento summo nigris: abdomine medio crissoque albis: alis caudaque nigris cyanescente marginatis, campteriis intensius cyanescentibus: rostro nigro, mandibulæ inferioris basi albicante: pedibus fusco-nigris: long. totâ 5·0, alæ 3·0, caudæ 1·9 poll. Angl.

Fœmina. Vix à mari diversa.

From the time when I first saw specimens of this bird, I have always remarked the differences between it and the last species—*Calliste nigriviridis*—which is so abundant in collections imported from Bogota, but its distinctive characters are perhaps more apparent when they strike the eye at the first glance, than they seem to be when a more minute comparison is made between the two birds. The late Mr. Dyson procured specimens of this Tanager when he was collecting in the province of Caraccas in Venezuela. He informed me that he found it in company with *Calliste guttata* and *atricapilla* in the vicinity of La Colonia de Tovar, which is situated at an elevation of about 8000 feet in the Venezuelan coast range. It was a skin of his preparation that first came into my possession, and attracted my notice. Since then I have frequently seen examples from Caraccas, particularly in the collection recently transmitted by M. Levraud to the Jardin des Plantes at Paris, of which I have already made mention, and amongst the birds collected by M. Sallé between La Guayra and the city of Caraccas.

An accurate comparison of this Tanager with the preceding species exhibits the following differences. The Venezuelan bird is rather larger in all its dimensions, and brighter in its colouring. Above, the

rump is more bluish in its tinge, and the wings, with the exception of the extremities of the outer primaries, are deeply margined with pale shining blue, without the greenish hue prevalent in the New Grenadian species. Below, the whole plumage is more bluish in appearance, particularly on the throat and breast, the feathers being much more deeply terminated with the bright colouring, and not so pointed in form as in *Calliste nigriviridis*. There is also more white on the middle of the belly and vent.

The prevalence of blue in the plumage of the Venezuelan bird, in comparison with the New Grenadian, induced me to call it *Calliste cyanescens*.

Imp Lemercier Paris

CALLISTE LARVATA.

THE MASKED TANAGER.

PLATE XXXVI.

Calliste larvata ..... *DuBus*, Esquisses Orn. pl. 9.
Gray, Gen. App. p. 17.
Bp. Consp. p. 236.
Sclater, Contr. Orn. 1851, p. 64; P. Z. S. 1856, p. 260; Syn. Av. Tan. p. 86.

Tatao larvatus ..... *Bp.* Rev. et Mag. de Zool. 1851, p. 42; Note s. l. Tang. p. 16.

Mas adultus. Capite colloque toto cum gula nitidissime cuprescenti-aureis: rostri ambitu nigro: vitta ultra frontem et capitis lateribus cæruleis, hujus coloris margine posteriore in viridescentem transeunte: interscapulio, alis caudaque cum pectore toto nigris: tectricibus alarum minoribus cæruleis, mediarum autem et majorum marginibus cum dorso postico cyaneis: remigibus et rectricibus aurescenti-viridi limbatis: abdomine medio albo, utrinque cæruleo, lateribus viridescentibus: rostro et pedibus nigris: long. totâ 5·0, alæ 2·9, caudæ 1·8 poll. Angl.

Fœmina. Mari similis sed coloribus paulò dilutioribus.

This beautiful Tanager was discovered by M. Auguste Ghiesbreght in the State of Tabasco in Southern Mexico; the most northern locality hitherto recorded for any species of the genus *Calliste*. The examples collected by M. Ghiesbreght were transmitted to the Museum at Brussels in 1841, and were first brought to the notice of Naturalists in 1846 by the Vicomte DuBus di Gisignies, who gave an accurate illustration of the bird in the second number of his 'Esquisses Ornithologiques.'

It is very noticeable that nearly every pure Neotropical or Tropical American genus seems to have a single or occasionally two representatives in Central America or Southern Mexico, north of the Isthmus of Panama; thus *Galbula*, with numerous species in the southern continent, is here represented by *G. melanogenia*, *Diglossa* by

D. baritula, Pipra by *P. mentalis, Formicarius* by *F. moniliger,* and *Cotinga* by the splendid *Cot. amabilis* lately described by Mr. Gould. This fact seems to show that the Isthmus of Panama is not the boundary between the northern and southern zoological regions of the New World, or, so to speak, between the Nearctic and Neotropical Faunæ, but that this must be sought for farther northwards, probably some way even beyond the Isthmus of Tehuantepec.

The late Mr. Dyson procured examples of this *Calliste* during his voyage up the Chamalican river in the republic of Honduras. Two of these specimens are now in the British Museum.

CALLISTE FRANCESCÆ.

Mrs. WILSON'S TANAGER.

Aglaia fanny ..... *Lafr.* R. Z. 1847, p. 72.

Calliste fanny ..... *Gray*, Gen. App. p. 17.
Bp. Consp. p. 236.
Des Murs, Icon. Orn. pl. 56. fig. 1.

Calliste francescæ .... *Sclater*, P. Z. S. 1856, pp. 142 et 261; Syn. Av. Tan. p. 87.

Mas adultus. Capite colloque toto cum gula nitidissime virescenti-aureis: rostri ambitu nigro, deinde cæruleo et in viridem transeunte: interscapulio alis caudaque cum pectore toto nigerrimis: dorso postico et tectricibus alarum mediis viridescenti-cyaneis: remigibus et rectricibus eodem colore anguste limbatis: tectricibus alarum summis cæruleis: abdomine medio crissoque albis, lateribus viridescenti-cæruleis: rostro et pedibus nigris: long. totâ 5·0, alæ 2·8, caudæ 1·6 poll. Angl.

Mr. Thomas Bridges, a corresponding Member of the Zoological Society of London, and well known for his extensive researches in Natural History in various parts of the New World, passed some time at the beginning of the year 1856 at the town of David, which lies some 25 miles from the Pacific coast of the province of Chiriqui, near the boundary line between the republics of New Grenada and Nicaragua. During his residence at this place, Mr. Bridges formed a small but interesting collection of Mammals and Birds, of which I have given an account in the Proceedings of the Zoological Society for 1856 (p. 138, et *seq.*).

One of the most beautiful birds in his collection was certainly a specimen of the present Tanager which at first I took to be a brightly coloured example of the *Calliste larvata*. For, the latter bird occurring in Central America, I was not surprised to find its range extending as far southwards as the Isthmus of Panama. But an accurate comparison of specimens of the *Calliste larvata* with Mr. Bridges' example showed differences which seemed hardly reconcileable with

their belonging to the same species, and I was eventually induced rather to refer the Panama bird to Lafresnaye's *Aglaia fanny*. This latter species was one of the many novelties discovered by the well-known French traveller and collector, the late M. Delattre, and was described by the Baron F. de Lafresnaye, in the 'Revue Zoologique' for 1847, and afterwards figured in Des Murs' 'Iconographie Ornithologique.' I had always previously considered it as identical with *Calliste larvata*; and indeed, without having the two birds together in one's hands, it is not very easy to point out the differences satisfactorily.

It may however be remarked that this *Calliste* is slightly smaller than *C. larvata*, and has the head of a much lighter golden green, in some lights passing almost into pale green. In the other bird, these parts are more of a coppery brown. In this species also, the lower back and edgings of the middle and greater wing-coverts are of a much greener tinge, and there is more white in the middle of the belly and crissum.

M. Delattre's specimen is said to be from New Grenada, and was probably procured southwards of the Isthmus. Mr. Bridges shot his example on the tops of some high trees in the vicinity of David, on the banks of the river of the same name. The former bird is now in the Museum of the Academy of Natural Sciences of Philadelphia, where I had the pleasure of inspecting it last autumn, the latter in Mr. Gould's collection. These are, I believe, the only two examples as yet procured of this Tanager.

I have thought it right slightly to modify the designation of this *Calliste*, calling it "*francescæ*" instead of "*fanny*," as the latter appellation is neither Latin nor like Latin, the language in which all scientific nomenclature ought to be written.

Oudart del.

Imp. Lemercier Paris

Calliste nigricincta

CALLISTE NIGRICINCTA.

THE BLACK-BANDED TANAGER.

PLATE XXXVII.

Aglaia nigro-cincta.... *Bp.* P. Z. S. 1837, p. 121.

Calliste nigro-cincta .. *Gray*, Gen. p. 366. sp. 16.
Bp. Consp. p. 235.
Sclater, Contr. Orn. 1851, p. 68.

Chalcothraupis nigro-cincta, *Bp.* R. Z. 1851, p. 145; Note s. l. Tang. p. 19.

Calliste thalassina .... *Strickl.* Ann. N. H. (1844) xiii. p, 419.
Gray, Gen. p. 366. sp. 30.
Sclater, Contr. Orn. 1851, p. 57; P. Z. S. 1854, p. 115, et 1855, p. 158.

Aglaia wilsoni ..... *Lafr.* R. Z. 1847, p. 71.

Calliste wilsoni ..... *Gray*, Gen. App. p. 17.
Bp. Consp. p. 236. sp. 37.
Des Murs, Icon. Orn. pl. 56. fig. 2.

Chrysothraupis thalassina, *Bp.* Rev. et Mag. de Zool. 1851, p. 143; Note s. l. Tang. p. 17.

Calliste lervata ..... *Cassin*, Rep. U. S. Astr. Exp. ii. p. 182. pl. 18. fig. 2.

Calliste nigricincta.... *Sclater*, P. Z. S. 1856, p. 261; Syn. Av. Tan. p. 87.

Mas adultus. Capite et cervice undique cum gula thalassino-cyaneis, regione auriculari cum mento pallide viridibus: loris, interscapulio et pectore toto nigerrimis: dorso postico læte cæruleo: abdomine medio albo, lateribus cærulescentibus: remigibus et rectricibus nigris cærulescenti-viridi marginatis: tectricibus alarum summis læte cæruleis, mediis et majoribus viridibus: rostro et pedibus nigris: long. totâ 5·0, alæ 2·8, caudæ 1·8 poll. Angl.

Fœmina. Vix a mari diversa.

In the Proceedings of the Zoological Society for 1837 is an account by Prince Bonaparte of an interesting collection of birds then lately received by Mr. Leadbeater from the interior of the northern portion of Brazil from the country bordering on Peru. Amongst other novelties there noticed for the first time, is a member of the present genus of Tanagers, which is characterized under the specific

title *nigrocincta*. The description however is so short and imperfect, that I was formerly quite at a loss to know to what species to refer it, and, had it not been for the kindness of the noble describer, who pointed out to me a specimen of this *Calliste* in his own collection as being the same as the individual called by him *nigrocincta*, I should hardly have ventured to apply that name to the present species. I may remark that I had previously looked through the Derby Collection (where the birds described in the before-mentioned paper are said to have been deposited) without succeeding in finding the type upon which this name was founded. The next earliest notice that we find of this bird is in the 'Annals of Natural History,' from the pen of the late Mr. Strickland, who gives an excellent description of it from a specimen in his own collection, and proposes for it the specific appellation *thalassina*. A third name, *Aglaia wilsoni*, was bestowed upon this bird in 1847 by the Baron de Lafresnaye, founded upon specimens collected by Delattre in the vicinity of Guaunco in Eastern Peru. Under this appellation it has been figured in Des Murs' 'Iconographie Ornithologique,' while Mr. Cassin (who has also given a representation of it in the Report of the United States Naval Astronomical Expedition to the Southern Hemisphere) has confounded it with another bird, and erroneously called it *Calliste larvata*.

Besides the localities above indicated, the Black-banded Tanager occurs in Bogota collections, and was among the birds received by Mr. Gould from the province of Quixos on the Rio Negro, of which I gave some account in the 'Proceedings' of the Zoological Society for 1854. Mr. Hauxwell has also transmitted specimens from the river Ucayali, and there are examples in the Vienna Museum procured by Natterer at Marabitanas on the Rio Negro, so that altogether this *Calliste* has a rather extensive range over the interior of the northern portion of the great valley of the Amazons.

Imp Lemercier Paris

Callista cyanicollis.

CALLISTE CYANEICOLLIS.

THE BLUE-NECKED TANAGER.

PLATE XXXVIII.

Aglaia cyanicollis ..... *Lafr.* et *d'Orb.* Syn. Av. in Mag. de Zool. 1837, p. 33.

Tanagra cyanicollis .... *d'Orb.* Voy. p. 271. pl. 25. fig. 1.

Callospiza cyanicollis.... *Tsch.* in Wiegm. Arch. 1844, p. 286; Faun. Per. p. 202.

Aglaia cæruleocephala .. *Sw.* An. in Men. p. 356.

Calliste cæruleocephala .. *Gray*, Gen. p. 366. sp. 18.
Bp. Consp. p. 235. sp. 19.

Calliste cyanicollis ..... *Sclater*, Contr. Orn. 1851, p. 115; P. Z. S. 1854, p. 115, 1855, p. 158, et 1856, p. 212; Syn. Av. Tan. p. 88.
Cassin, Rep. U. S. Astr. Exp. ii. p. 181. pl. 18. fig. 1.

Mas adultus. Capite toto et gutture undique læte cyaneis: gula purpurascente: loris interscapulio et abdomine toto nigerrimis; hoc cæruleo lavato: dorso postico et alarum tectricibus pallide viridibus, tectricibus alarum summis aurescentioribus: remigibus et rectricibus nigris viridi angustè marginatis: rostro et pedibus nigris: long. totâ 4·7, alæ 2·6, caudæ 1·7 poll. Angl.

Fœmina. Mari similis, sed coloribus paulò dilutioribus.

The Zoology of the north-eastern provinces of the Bolivian Republic, where the southern confluents of the Amazons take their rise, was first investigated by the great French traveller and naturalist Alcide d'Orbigny. A large part of the birds collected by him in this district (which he first described in conjunction with M. de Lafresnaye in the 'Magasin de Zoologie,' and afterwards more fully noticed in his 'Voyage dans l'Amérique Méridionale') were at that time quite new to science. Since then, I am not aware that any European collector has visited this region except Mr. Bridges, who explored parts of this portion of Bolivia, and collected a

considerable number of specimens of birds, which are now in the British Museum and in the Derby Collection at Liverpool. Most of the peculiar Bolivian species, therefore (such as *Buthraupis montana*, *Compsocoma flavinucha*, *Diuca speculifera*, *Poospiza luteocephala*, &c.), are still scarce in collections. Other birds, however, first discovered by M. d'Orbigny in Bolivia, have since been found in great abundance farther northwards, in Eastern Peru and New Grenada, and in fact many of the South American species seem to have a very extensive range from north to south in this direction. Such is the case with the present Tanager, and, as I have already had occasion to remark, with *Calliste guttata*, *C. gyroloides*, and *C. boliviana*.

The Blue-necked Tanager was found by d'Orbigny in company with *Callistæ yeni* and *schranki* in the forests inhabited by the Yuracares Indians, who call it "*Pisuta*." Like the two latter species, he tells us it goes in small troops, constantly moving about among the summits of the forest-trees and palms. Dr. Tschudi met with this bird in the hot wood-region of Eastern Peru, and the specimens upon which Swainson founded his name *cæruleocephala* were, I believe, obtained by one of Sir W. Hooker's Botanical Collectors in the same country. Farther northwards we find it occurring on the Rio Napo in the Equatorian province of Quixos, and by no means uncommon in collections brought from Bogota.

The only near ally of the present bird is the last species, *C. nigricincta*, to which it presents some resemblance in the arrangement of the colours, but, as will be seen by the figures, the two birds are not sufficiently alike to render them liable to be confounded together.

Calliste labradoroides

CALLISTE LABRADORIDES.

THE METALLIC-GREEN TANAGER.

PLATE XXXIX.

Tanagra (Aglaia) labradorides .. *Boiss.* R. Z. 1840, p. 67.
Less. Descr. d. Mamm. et Ois. p. 347.

Aglaia labradorides ..... *F. Prévost*, Voy. Venus, Ois. pl. 5. fig. 2.

Calliste labradorides ..... *Gray*, Gen. p. 366. sp. 25.
Bp. Consp. p. 235.
Sclater, Contr. Orn. 1851, p. 57; P. Z. S. 1855, p. 158, et 1856, p. 262; Syn. Av. Tan. p. 88.

Mas adultus. Nitenti-viridis cæruleo vix tinctus, capite aurescentiore: fronte, loris, mento summo, nuchâ et cervice posticâ cum scapularibus omninò nigris: alis caudâque nigris cærulescenti-viridi marginatis: tectricibus alarum summis cæruleis: ventre imo et crisso pallidè ochraceis: rostro nigro, pedibus brunneis: long. totâ 4·5, alæ 2·6, caudæ 1·7 poll. Angl.

Fœmina. Mari similis.

Ornithologists, and, I believe I may venture to say, Naturalists in general of the present generation, are not always very particular as to the pure Latinity of the names used as specific appellations for the objects described by them, or as to their meaning being immediately obvious to the uninitiated. It would puzzle Œdipus himself to guess at the derivation of some of the terms applied to members of the animated creation, and the name of the present Tanager is, I think, by no means one of the least obscure in its interpretation: I confess I was totally at a loss to conceive what was the meaning of calling this bird *labradorides*, until I was informed by an eminent French Ornithologist that it was intended to signify that it shone like Labrador spar!

This *Calliste* is one of the commonest species of the genus in Bogota collections, and was amongst the first importations brought to

Paris from that part of the world. All the examples of it which have come under my notice have the usual unmistakeable appearance of Bogota skins, having the wings and tail pushed up into the body, and the whole skin compressed, flattened and exceedingly compact. I have no doubt that the bird occurs in considerable abundance in the valleys of some of the confluents of the Upper Magdalena, not far removed from the New-Grenadian capital. Its range is probably confined to this region, as I have never seen it from any part of the valley of the Amazon, nor from the streams flowing into the Orinoco. There is a sufficiently accurate representation of this *Calliste* in the Natural-History Atlas of the Voyage of the Venus. It does not much resemble any other species of the genus, and will be easily recognized by the accompanying figure.

Imp Lemercier Paris

Calliste rufigenis

CALLISTE RUFIGENIS.

THE RUFOUS-CHEEKED TANAGER.

PLATE XL.

Calliste rufigenis .... *Sclater*, P. Z. S. 1856, p. 311.

Mas adultus. Cærulescenti-viridis, interscapulio obscuriore: loris, capitis lateribus et regione auriculari cum mento summo rufis: alarum remigibus fusco-nigris, cuprescenti-viridi limbatis: cauda fusco-nigra virescente marginata: subtus virescentior quam supra; abdomine medio, tibiis et tectricibus subalaribus albescenti-ochraceis: crisso rufescenti-ochraceo: rostro et pedibus nigris: long. totâ 5·0, alæ 2·7, caudæ 1·7 poll. Angl.

My friends MM. Jules and Edouard Verreaux, of Paris, kindly transmitted to me two specimens of this species last summer, just after I had completed the Synopsis of Tanagers, published in the Proceedings of the Zoological Society for the past year. To both of those gentlemen I am greatly indebted for numerous acts of kindness, and to M. Jules Verreaux (who has turned his attention particularly towards Ornithology, and is as well acquainted with that subject as, perhaps, any Naturalist living), for a large quantity of valuable information concerning the present and other groups of birds to which I have at times directed my attention.

The Rufous-cheeked Tanager is rather noticeable for showing much less-decided tints of colouring than is usual in birds of this group. It is, I think, most naturally placed in the present section, next to *Calliste labradorides*, but is readily distinguishable from that species and its congeners by the rufous ear-coverts and the want of black colouring on the back.

The MM. Verreaux received their specimens of this bird from Venezuela, but without any accompanying information. I am, however, not at all surprised at the vast delta of the Orinoco and enormous woodlands traversed by that noble stream and its numerous branches

producing distinct species of birds. Besides the present one, another Calliste (*C. cucullata*) is met with only in this region, and, when the district is well explored, there is little doubt that we shall be rewarded by further discoveries.

... fecit del.

Imp. Lemercier Paris

Calliste parudarii

CALLISTE PARZUDAKII.

PARZUDAKI'S TANAGER.

PLATE XLI.

Tanagra parzudakii.... *Lafr.* R. Z. 1843, p. 97; Mag. de Zool. 1843, pl. 41.

Calliste parzudakii.... *Gray*, Gen. p. 366. sp. 27.
Bp. Consp. p. 235.
Sclater, Contr. Orn. 1851, p. 66; P. Z. S. 1854, p. 115; 1855, p. 158; 1856, p. 263; Syn. Av. Tan. p. 89.

Chrysothraupis parzudakii, *Bp.* R. Z. 1851, p. 143; Note s. l. Tang. p. 18.

Mas adultus. Niger: dorso postico cum tectricibus alarum minoribus et tectricum majorum apicibus externis argenteo-cyanescentibus: pileo toto cum nucha et collo laterali flavissimis; fronte et regione oculari ruberrimis: loris nigris: subtùs argenteo-cyanescenti-viridis, ochraceo tinctus; gula nigra; ventre medio crissoque ochraceis: rostro nigro: pedibus nigro-fuscis: long. totâ 5·5, alæ 3·3, caudæ 2·0 poll. Angl.

Fœmina. Mari similis.

The mountain-valleys of New Grenada—so rich in the varied productions of Nature—are again the home of this beautiful species of the genus *Calliste*. It was first described by Baron de Lafresnaye in the 'Revue Zoologique' for 1843, and is figured in the 'Magasin de Zoologie' for the same year. The name attached to it is that of one of the best-known of the Marchand-Naturalistes of the French capital, and is a just tribute to one who has done so much to increase our knowledge of the rich Fauna of Tropical America.

Parzudaki's Tanager, however, is not, as appears to be the case with the last preceding species, quite confined to New Grenada: examples of it were contained in the small but interesting collection received by Mr. Gould from the province of Quixos in the neighbouring republic of Ecuador—to which I have already frequently made reference in these pages.

In respect of general plumage, as well as in size and conformation,

the present bird and the two following species are nearly allied to one another, and form a small homochroous group. They are rather larger in size than the birds which immediately precede them in my arrangement, and have the bill rather stronger. All three agree in the metallic bluish-green and black of their general plumage; but the present bird may be immediately distinguished from its two affines by the bright red colouring on the front and sides of the head, of which there is no trace in either of the other species.

There are examples of this bird in the British and French National Collections.

Imp. Geny-Gros, Paris.

Calliste lunigera.

CALLISTE LUNIGERA.

THE BLACK-EARED TANAGER.

PLATE XLII.

Calliste lunigera .... *Sclater*, Contr. Orn. 1851, p. 65, pl. 70, fig. 2; P. Z. S. 1856, p. 263; Syn. Av. Tan. p. 89.

Mas adultus. Suprà niger: dorso postico cum tectricibus alarum minoribus et tectricum majorum secundariarumque marginibus argenteo-viridescentibus: pileo toto et capitis lateribus intensè aurantiacis, macula magna auriculari nigra: subtùs argenteo-viridescens rufo mixta: abdomine rufescenti-ochraceo: rostro et pedibus nigris: long. totâ 5·3, alæ 2·8, caudæ 1·8 poll. Angl.

Fœmina. Mari similis.

The least-explored portion of the S. American continent, and where I imagine most novelties are still to be met with, is the country lying to the west of the great range of the Andes in the republics of New Grenada and Ecuador. Below the Gulf of Guyaquil the western watershed of S. America becomes very much narrowed, and the country, being almost rainless, is arid and comparatively devoid of vegetation; but to the northward of this, beneath the perpetual precipitation which takes place under the Equator, the vegetation is as luxuriant and the forests as interminable as upon the eastern slope of the range. Along the coast of this region little has been done in the way of obtaining zoological specimens. During the voyage of Capt. Kellett in H.M.S. 'Herald,' a certain number of animals were collected in the Bay of Choco and upon the island of Puna in the Gulf of Guyaquil, which are now in the British Museum, and the indefatigable traveller Delattre also collected a little around Buenaventura, and penetrated into the interior by this route as far as Popayan and Pasto, but on the whole we are very little acquainted with the zoology of this interesting country.

Farther southwards in the vicinity of Quito we are more fortunate. Professor William Jameson, who has been some years resident at

Quito, where he holds the professorship of Natural History at the University as well as an official appointment in the administration of the Mint, has for several years devoted much attention to Ornithology, and has transmitted various collections to Sir William Jardine, accounts of which will be found in the 'Contributions to Ornithology' and the new series of the 'Edinburgh Philosophical Journal.'

Among the *Callistæ* peculiar to the valleys in the neighbourhood of the republican capital, is the present handsome species. I became first acquainted with it from a single specimen received by Mr. Edward Wilson from MM. Verreaux of Paris in 1851, but lately Sir William Jardine and Mr. Gould have each obtained examples through the agency of Professor Jameson, which fully confirm my ideas as to its specific distinctness. To the former of those gentlemen I am indebted for a second example of this Tanager, which was procured by Professor Jameson on the western declivity of the Andes near Calacali.

As I have already observed in speaking of *Calliste parzudakii*, the present bird greatly resembles that species in general appearance, but may be distinguished by the want of the bright red colouring on the front and sides of the head.

Lith Gerv Cros Paris

Calliste chrysotis

CALLISTE CHRYSOTIS.

THE GOLDEN-EARED TANAGER.

PLATE XLIII.

Calliste chrysotis .... *DuBus*, Esquisses Orn. pl. 7.
Gray, Gen. App. p. 17.
Bp. Consp. p. 236.
Sclater, Contr. Orn. 1851, p. 66; P. Z. S. 1856, p. 263; Syn. Av. Tan. p. 89.

Chrysothraupis chrysotis, *Bp.* Rev. et Mag. de Zool. 1851, p. 142; Note s. l. Tang. p. 17.

Mas adultus. Suprà niger: dorso postico et interscapulii alarumque pennarum omnium marginibus clare viridibus: pileo nigro: fronte aurescenti-viridi: regione auriculari cuprescenti-aureo: subtùs clare viridis: abdomine medio crissoque castaneis: rostro et pedibus nigris: long. totâ 5·5, alæ 2·9, caudæ 1·9 poll. Angl.

The second number of the Vicomte DuBus' beautiful but too little-known work entitled 'Esquisses Ornithologiques,' contains a representation of this species of *Calliste*, which was thus for the first time brought before the notice of the scientific world. It is much to be regretted that this book was discontinued after the appearance of the fourth number, which was, I believe, the last published, although Prince Bonaparte in his 'Conspectus' has quoted the figures of the succeeding part and given descriptions of some of the species of birds which it was intended to have contained.

The describer of this Tanager tells us little about it except that it is an inhabitant of the eastern part of Peru, where it was discovered by the Baron Popelaire de Terloo, who only met with a single individual of the male sex. I regret to say I can add but very little to M. DuBus' account. A single example of this bird only has ever come under my notice, though I am tolerably well acquainted with the museums and collections of Natural History in Europe and North America, and have carefully examined the specimens of Tanagers in all of them. The individual I allude to was obtained by Mr. Ed-

ward Wilson from MM. Verreaux of Paris. Thanks to the kindness of that gentleman, it is at present along with many other specimens belonging to the same owner under my care, having been entrusted to me with the view of enabling me to work out the history of these birds with greater completeness. This individual was probably obtained upon one of the upper branches of the Peruvian Amazon, but the exact locality is not known. The accompanying figure is drawn from this specimen.

From the two preceding species, which are those that the present bird most closely resembles, it may be distinguished by the want of the orange cap on the head and of the black throat.

Lith. Geny Gros Paris

1 Tanagra pandion-pralis — 2 venusta.

CALLISTE XANTHOCEPHALA.

THE ORANGE-CROWNED TANAGER.

PLATE XLIV. Fig. 1.

Callospiza xanthocephala, *Tsch.* Wiegm. Arch. 1844, p. 285; Faun. Per. p. 200. pl. 17. fig. 2 (*fig. pess.*).
Gray, Gen. App. p. 17.
Bp. Consp. p. 235.

Calliste lamprotis .... *Sclater*, Contr. Orn. 1851, p. 65.

Chrysothraupis xanthocephala, *Bp.* Rev. et Mag. de Zool. 1851, p. 443; Note s. l. Tang. p. 17.

Calliste xanthocephala, *Sclater*, P. Z. S. 1856, p. 264; Syn. Av. Tan. p. 90.

Mas adultus. Cærulescenti-viridis: interscapulii alarum et caudæ plumis nigris, illo colore limbatis: fronte, loris, regione oculari, gulâ summâ et cervice posticâ nigris: pileo toto aurantiaco: capitis lateribus cum regione auriculari flavissimis: ventre medio et crisso pallidè ochraceis: rostro nigro: pedibus brunneis: long. totâ 5·3, alæ 2·9, caudæ 1·9 poll. Angl.

Dr. Tschudi discovered this brilliant species of *Calliste* in the hot wood-region of Eastern Peru, and described and figured it in his "Untersuchungen über die Fauna Peruana." The plate of the bird, however, there given is by no means an accurate representation of this Tanager, and certainly more nearly resembles the next-following species *Calliste venusta*. There are no signs in Dr. Tschudi's drawing of the bright reddish-orange of the crown, which offers quite a brilliant contrast to the golden-yellow sides of the head, and at once distinguishes the present species from the following. Under such circumstances therefore, it is not astonishing that I fell into the error of considering the next-following bird to be Tschudi's *xanthocephala*, and describing the present species as new under the title of *Calliste lamprotis*. In the Berlin and, if I mistake not, in the French National Collection also, I found this same bird marked *Calliste xanthocephala*, so I was not alone in my error. Great was my surprise,

therefore, when, on examination of Tschudi's types in the collection of the Gymnasium at Neufchatel, I perceived that the case was quite different,—that my *C. lamprotis* was the true *xanthocephala*, and that the bird which I had, in common with others, always regarded as entitled to bear that name, was quite a different species. The example of this bird in the British Museum upon which I established the name *lamprotis*, was obtained by Mr. Bridges in Bolivia. Besides this and Tschudi's type at Neufchatel and a single skin in my own collection, I am not aware of the existence of any other specimens of this Tanager.

CALLISTE VENUSTA.

THE YELLOW-CROWNED TANAGER.

PLATE XLIV. Fig. 2.

Calliste xanthocephala.. *Sclater*, Contr. Orn. 1851, p. 58; P. Z. S. 1854, p. 115.

Calliste venusta ..... *Sclater*, P. Z. S. 1854, p. 248, 1855, p. 158, et 1856, p. 264; Syn. Av. Tan. p. 90.

Mas adultus. Clarè cærulescenti-viridis, interscapulii, alarum et caudæ pennis nigris eodem viridi limbatis: fronte, loris, gulâ summâ et cervice posticâ nigris: pileo et capitis lateribus flavis: ventre medio crissoque pallidè ochraceis: rostro nigro: pedibus brunneis: long.totâ 4·5, alæ 2·5, caudæ 1·5 poll. Angl.

Specimens of this pretty Tanager have been in my possession for several years, and, until I saw and examined the type of Tschudi's *Callospiza xanthocephala*, in the collection of the Gymnasium at Neuchâtel, as I have already mentioned, I always regarded it as belonging to that species. I was certainly not singular in my error, as there are specimens of it in several museums marked with Tschudi's appellation: this is the case even at Berlin, where, if at any place, Tschudi's types ought to be well understood. When I discovered my mistake, I renamed the present bird "*venusta*." Its native country is the interior of New Grenada, whence specimens are occasionally sent in collections from Bogota—not however so commonly as is the case with many other species of this genus. I think it probably comes from the valleys on the south-eastern slope of the New-Grenadian Andes, because it is also received from the Upper Rio Napo, in the neighbouring republic of Ecuador, and, as far as we know hitherto, the same species of Passeres rarely, if ever, occur on both sides of the main range.

The only bird much resembling the present *Calliste* in appearance is the preceding species, from which, however, the uniform yellow colouring of the head is alone sufficient to distinguish it. This will be seen at a glance by referring to the plate whereon both are depicted.

CALLISTE INORNATA.

THE PLAIN-COLOURED TANAGER.

PLATE XLV.

Calliste inornata..... *Gould*, P. Z. S. 1855, p. 158 (note).
Sclater, P. Z. S. 1856, p. 258; Syn. Av. Tan. p. 84.

Mas adultus? Suprà nigricanti-griseus: alis caudâque fusco-nigris, tectricibus alarum minoribus turcoso-cæruleis: subtùs valdè pallidior: abdomine toto cum crisso et tectricibus subalaribus lactescenti-albis: rostro nigricanti-plumbeo: pedibus nigris: long. totâ 4·75, alæ 2·5, caudæ 1·75 poll. Angl.

I have to thank Mr. Gould for the loan of the only example of the present species of *Calliste* which has ever come under my notice, and from which the accompanying figure has been made. It is the type of the original description in a note to my list of birds received from Bogota, published in the "Proceedings of the Zoological Society" for the year 1855. Although I am not myself quite satisfied of its claims to be considered as a good species, yet there is no known member of the genus to which I can refer it, and for the present, therefore, I place it by itself at the end of the others. Mr. Gould considers it to be in adult plumage, and to be a plain-coloured member of the section of the genus *Calliste* containing the Turquoise Tanagers (*C. brasiliensis, flaviventris*, &c.), for which I have suggested the subgeneric term *Euprepiste*. It is certainly the fact that in many groups of gaily-coloured birds, we find one or two species which are remarkable for the plainness of their plumage in comparison with their congeners. Thus among the brilliant black and crimson East Indian *Pericrocoti* we find the dull and unpretending *P. cinereus* of the Philippines. And in genera where the males and females are of different colours, there occasionally occur species where the males are clothed in the normal dress of the females. So the male and female of *Pachyrhamphus rufescens* are of a uniform brown—the ordinary

colouring of the females of that group. But in the present case there is so much of the general appearance of an immature bird, that I am not yet persuaded that Mr. Gould's *Calliste inornata* is in adult plumage, and at any rate I should like to see other specimens before committing myself on this point.

The Plain-coloured Tanager is from the interior of New Grenada, and the single specimen alluded to has the usual unmistakeable appearance of a "Bogota" skin.

4° 1822 c

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